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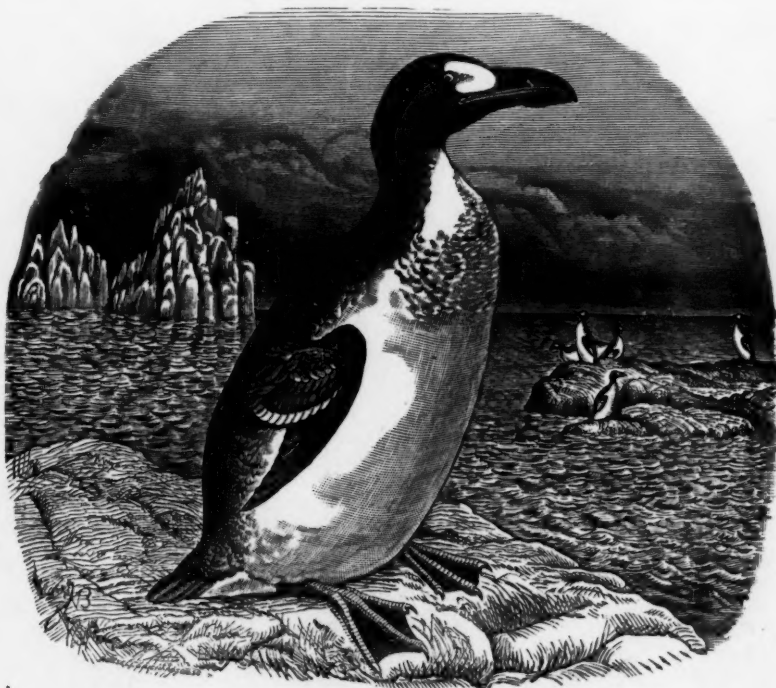
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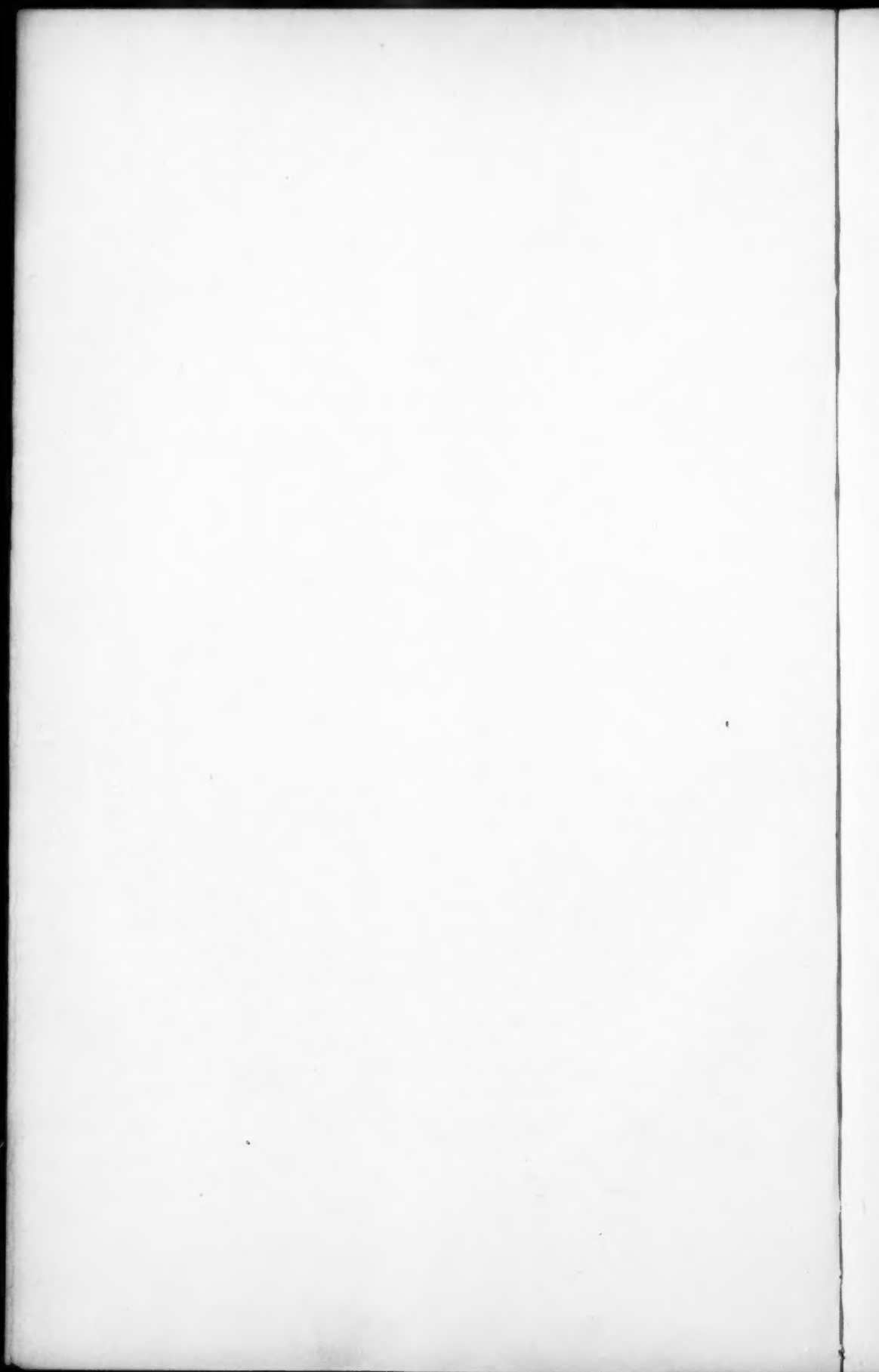
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HARVIE-BROWN, JOHN A., Dunipace House, Larbert, Stirlingshire, Scotland.....	1883
HAYEK, DR. GUSTAV VON, Vienna.....	1884
HENSON, HARRY V., Yokohama.....	1888
HUDSON, WILLIAM HENRY, Tower House, St. Luke's Road, Westbourne Park, London, W.....	1895
KNUDSON, VALDEMAR, Kauai, Hawaiian Ids.....	1888
KRUKENBERG, DR. E. F. W., Würzburg, Germany.....	1884
KRÜPER, DR. THEOBALD J., University Museum, Athens, Greece....	1884
LEGGE, WILLIAM V., Cullenswood House, St. Mary's, Tasmania....	1891
LEVERKÜHN, PAUL, Sophia, Bulgaria.....	1890
MACFARLANE, ROBERT, Winnipeg, Manitoba.....	1886
MADARÁSZ, DR. JULIUS VON, National Museum, Budapest, Hungary..	1884
MENZBIER, DR. M., Imperial Society of Naturalists, Moscow.....	1884
NAMIYE, M., Tokio.....	1886
NICHOLSON, FRANCIS, 84 Major St., Manchester, England.....	1884
OATES, EUGENE WILLIAM, 1 Carlton Gardens, Ealing, London, W..	1884
ODDI, Count E. ARRIGONI DEGLI, University of Padua, Italy.....	1900
OUSTALET, DR. EMILE, Jardin des Plantes, 55 Rue de Buffon, Paris..	1888
PALMÉN, Prof. J. A., Helsingfors, Finland.....	1883
PHILIPPI, DR. R. A., Santiago, Chili.....	1884
RADDE, DR. GUSTAV FERDINAND, Tiflis, Russia.....	1884
RAMSEY, E. P., Sydney, New South Wales.....	1884
RINGER, FREDERIC, Nagasaki, Japan.....	1888
ROTHSCHILD, Hon. L. WALTER, Zoöl. Museum, Tring, England....	1898
SCHALOW, DR. HERMAN, 15 Schleswiger Ufer, Berlin, N. W.....	1884
SHELLEY, Capt. G. E., 39 Edgerton Gardens, South Kensington, London, S. W., England.....	1884
THEEL, DR. HJALMAR, University of Upsala, Upsala, Sweden.....	1884
TRISTRAM, Rev. Canon H. B., The College, Durham, England.....	1884
TSCHUSI ZU SCHMIDHOFFEN, Count VICTOR RITTER VON, Hallein, (Villa Tännenhof), Salzburg, Austria.....	1884
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AMES, J. H., 96 Bay St., Toronto, Can.....	1895
ANGELL, WALTER A., 354 Westminster St., Providence, R. I.....	1901
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BARBOUR, Mrs. WM. D., 235 Madison Ave., New York City.....	1901
BARNARD, JOB, 1306 Rhode Island Av., Washington, D. C.....	1886
BARNES, Hon. R. MAGOON, Lacon, Ill.....	1889
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BARTSCH, PAUL, Smithsonian Institution, Washington, D. C.....	1896
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BEEBE, CHARLES WILLIAM, N. Y. Zoölogical Park, 183rd St. and Southern Boulevard, New York City.....	1867
BEERS, HENRY W., 91 Denver Ave., Bridgeport, Conn.....	1895
BENNETTS, WM. J., 154 U. St. N. W., Washington, D. C.....	1901
BENT, ARTHUR CLEVELAND, Taunton, Mass.....	1889
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BERIER, DE LAGNEL, Port Chester, N. Y.....	1885
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BLAIN, ALEX. W., Jr., 131 Elmwood Ave., Detroit, Mich.....	1901
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BLATCHLEY, W. S., State Geologist, Indianapolis, Ind.....	1895
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BOWDITCH, HAROLD, Jamaica Plain, Boston, Mass.....	1900
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BRADFORD, Mrs. MARY F., 3804 St. Charles Av., New Orleans, La..	1897
BRADFORD, MOSES B. L., 295 Beacon St., Boston, Mass.....	1889
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BROCKWAY, 'ARTHUR WILLIAM, Lyme, Conn.....	1898
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BROWN, EDWARD J., Lemon City, Florida.....	1891
BROWN, HUBERT H., 70 Collier St., Toronto, Ontario.....	1889
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BROWN, WILMOT W., Jr., West Somerville, Mass.....	1892
BUCK, HENRY ROBINSON, P. O. Box 213, Hartford, Conn.....	1897
BULLEY, REGINALD H., Canton, Ohio.....	1889

BUMPUS, DR. HERMON C., Am. Mus. Natural History, New York City.....	1901
BUNNELL, ALEXANDER STERLING, Berkeley, Calif.....	1899
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BURKE, WM. BARDWELL, 130 Spring St., Rochester, N. Y.....	1901
BURNETT, WILLIAM L., 359 Pine St., Fort Collins, Colo.....	1895
BURTIS, HENRY MOTT, Babylon, N. Y.....	1897
BURTON, H. C., 228 South St., New York City.....	1893
BUSWELL, WALTER MARDIN, Charlestown, N. H.....	1897
BUXBAUM, MRS. CLARA E., St. Joseph, Mich.....	1895
CAMPBELL, HORATIO NELSON, Jr., Providence, R. I.....	1899
CANFIELD, J. B., Bridgeport, Conn.....	1901
CARPENTER, CHARLES KNAPP, Pecatonica, Ill.....	1894
CARROLL, JAMES J., Waco, Texas.....	1898
CARSON, ROBERT DUNCAN, 419 W. Rittenhouse St., Germantown, Philadelphia, Pa.....	1899
CARY, MERRITT, Neligh, Neb.....	1898
CASE, CLIFFORD M., 89 William St., Hartford, Conn.....	1892
CASH, HARRY A., 54 Spring St., Pawtucket, R. I.....	1898
CHAMBERLAIN, CHAUNCY W., 36 Lincoln St., Boston, Mass.....	1885
CHAPIN, Prof. ANGIE CLARA, Wellesley College, Wellesley, Mass....	1896
CHASE, MRS. AGNES, 5515 Monroe Av., Chicago, Ill.....	1896
CHILDS, JOHN LEWIS, Floral Park, N. Y.....	1900
CHRISTY, BAYARD H., 403 Frederick Ave., Sewickley, Pa.....	1901
CHUBB, SAMUEL H., 468 W. 153d St., New York City.....	1894
CLARK, AUSTIN HOBART, Newtonville, Mass.....	1899
CLARK, EDWARD B., 304 No. State St., Chicago, Ill.....	1900
CLARK, HUBERT LYMAN, Olivet College, Olivet, Mich.....	1886
CLARK, JOSIAH H., 238 Broadway, Paterson, N. J.....	1895
CLARKE, Miss HARRIET E., 9 Chestnut St., Worcester, Mass.....	1896
COALE, HENRY K., Highland Park, Ill.....	1883
COGGINS, HERBERT LEONARD, 5025 McKean Av., Germantown, Phila., Pa.....	1898
COLBURN, ALBERT E., 1233 G St., N. W., Washington, D. C.....	1891
COLLINS, JOHN ARTHUR, Jr., Lawrence, Mass.....	1900
COLVIN, WALTER S., Osawatomie, Kansas.....	1896
COMEAU, NAPOLEON A., Godbout, P. Q.....	1885
COMEY, ARTHUR C., 54 Concord Ave., Cambridge, Mass.....	1901
CONANT, Mrs. MARTHA W., 841 No. Broad St., Elizabeth, N. J.....	1901
COOK, Miss LILIAN GILLETTE, 165 W. 82d St., New York City....	1899
COPE, ALBAN, Butler Hospital, Providence, R. I.....	1885
COPE, FRANCIS R., Jr., Cambridge, Mass.....	1892
COPELAND, Dr. ERNEST, 141 Goldsmith Bldg., Milwaukee, Wis.....	1897
COPELAND, MANTON, Taunton, Mass.....	1900
COUES, Dr. WILLIAM PEARCE, 90 Charles St., Boston, Mass.....	1888
COX, ULYSSES O., State Normal School, Mankato, Minn.....	1894
CRAM, R. J., 26 Hancock Ave., W., Detroit, Mich.....	1893

CRANDALL, C. W., Woodside, N. Y.....	1891
CROLIUS, Miss ANNE A., 815 Carnegie Hall, New York City.....	1897
CURRIE, ROLLA P., U. S. Nat. Mus., Washington, D. C.....	1895
CURRIER, EDMONDE SAMUEL, 909 Franklin St., Keokuk, Iowa.....	1894
DANIEL, JOHN W., Jr., 3146 Q St., N. W., Washington, D. C.....	1895
DART, LESLIE O., St. Barnabas Hospital, Minneapolis, Minn.....	1898
DAVENPORT, Mrs. ELIZABETH BRAXTON, Brattleboro, Vt.....	1898
DAVIS, Miss MARY A., 44 W. 93rd St., New York City.....	1898
DAVIS, STEWART, Narragansett Pier, R. I.....	1899
DAVIS, WALTER R., Newton, Mass.....	1900
DAVISON, DONALD B., 204 Prospect Park, Davenport, Iowa.....	1901
DAWSON, Rev. WILLIAM LEON, Columbus, O.....	1895
DAY, CHESTER SESSIONS, 280 Newbury St., Boston, Mass.....	1897
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DEAN, R. H., Lexington, Ky.....	1893
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DERBY, RICHARD, 13 Holworthy St., Cambridge, Mass.....	1898
DEWEY, Dr. CHARLES A., 53 So. Fitzhugh St., Rochester, N. Y.....	1900
DEWEY, Miss MARGARET, 168 Pearl St., Springfield, Mass.....	1892
DICKINSON, JOSEPH A., Gresham, Nebr.....	1894
DILLE, FREDERICK M., Altona, Boulder Co., Colo.....	1892
DIONNE, C. E., Laval Univ., Quebec, Can.....	1893
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DODGE, FRED CLINTON, 125 Milk St., Boston, Mass.....	1897
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DOUGHERTY, Col. WILLIAM E., Vancouver Barracks, Wash.....	1890
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DULL, Mrs. A. P. L., 211 No. Front St., Harrisburg, Pa.....	1900
DURFEE, OWEN, Fall River, Mass.....	1887
DUTCHER, Dr. BASIL HICKS, U. S. A., Care of Surgeon General's Office, Washington, D. C.....	1886
DYCHE, Prof. L. L., Lawrence, Kansas.....	1886
EASTMAN, HARRY D., Framingham, Mass.....	1891
EATON, ELON HOWARD, Rochester, N. Y.....	1895
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FLANAGAN, JOHN H., 392 Benefit St., Providence, R. I.....	1898
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FLINT, HARRY W., Yale National Bank, New Haven, Conn.....	1888
FOOTE, Miss F. HUBERTA, Yonkers, New York City.....	1897
FORBUSH, EDWARD H., Wareham, Mass.....	1887
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FOSTER, FRANCIS APTHORP, 15 Oxford St., Cambridge, Mass.....	1893
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FOWLER, HENRY W., Stanford Univ., Cala.....	1898
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FULLER, CHARLES ANTHONY, Sumner Road, Brookline, Mass.....	1894
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GLENNAN, Dr. JAMES DENVER, U. S. A. Care of Surgeon General's Office, Washington, D. C.....	1898
GODDARD, F. N., 2 E. 35th St., New York City.....	1901
GOLDMAN, EDWARD ALPHONSO, Dept. of Agriculture, Washington, D. C.....	1897
GOODALE, Dr. JOSEPH LINCOLN, 397 Beacon St., Boston, Mass.....	1885
GOULD, HENRY, 648 Dundas St., London, Ontario.....	1899

GOULD, JOSEPH E., 519 Lookout St., Chattanooga, Tenn.....	1889
GRANGER, WALTER W., Am. Mus. Nat. Hist., New York City.....	1891
GRAY, RALPH W., 79 Marlborough St., Boston, Mass.....	1896
GREEN, MORRIS M., Syracuse, N. Y.....	1886
GREENOUGH, HENRY V., Martha's Vineyard, Mass.....	1901
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HALL, GARDNER W., 122 Jackson Place, Baltimore, Md.....	1900
HALL, Miss MINNA B., Brookline, Mass.....	1900
HAM, JUDSON BAXTER, Johnson, Vt.....	1894
HAMFELDT, A., 305 Main St., Ottawa, Ill.....	1892
HAMLIN, GEORGE L., Bethel, Conn.....	1893
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HARRIMAN, Miss CORNELIA, 1 E. 55th St., New York City.....	1899
HARRIMAN, Miss MARY, 1 E. 55th St., New York City.....	1899
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HARVEY, HERBERT A., 113 Main St., Bradford, Pa.....	1899
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HAZARD, Miss MARY PEACE, Peace Dale, R. I.....	1896
HAZARD, R. G., Peace Dale, R. I.....	1885
HECOX, Miss LAURA J. F., Light House Keeper, Santa Cruz, Cala...	1897
HEDGES, CHARLES F., Miles City, Mont.....	1891
HEGNER, ROBERT W., 363 No. Winchester Ave., Chicago, Ill.....	1901
HEIMSTREET, Dr. T. B., 14 Division St., Troy, N. Y.....	1888
HELME, ARTHUR H., Millers Place, Suffolk Co., N. Y.....	1888
HENDRICKSON, W. F., 130 12th St., Long Island City, N. Y.....	1885
HENNINGER, Rev. WALTHER F., Tiffin, Ohio.....	1898
HENRY, Miss MARY CATHERINE, 28 Freeland St., Worcester, Mass...	1898
HIGBEE, HARRY G., Hyde Park, Mass.....	1900
HIGGINSON, ALEXANDER HENRY, Lincoln, Mass.....	1899
HILL, JAMES HAYNES, Box 485, New London, Conn.....	1897
HINDSHAW, HENRY HAVELOCK, Johns Hopkins Univ., Baltimore, Md.....	1897
HINE, Prof. JAMES STEWART, State Univ., Columbus, O.....	1899
HINE, Mrs. JANE L., Sedan, Ind.....	1890
HINTON, Miss SUSAN McV., 41 W. 32d St., New York City.....	1900
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HODGE, Prof. CLIFTON FREMONT, Clark Univ., Worcester, Mass.....	1899
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HOLLAND, Dr. WILLIAM J., 5th and Bellefield Aves., Pittsburgh, Pa...	1899
HOLLISTER, NED, Delavan, Wis.....	1894
HOLLISTER, WARREN D., Care of Cont. Oil Co., Denver, Colo.....	1901
HOLSTEIN, OTTO, 910 Ave. C, San Antonio, Texas.....	1898
HOOPES, JOSIAH, West Chester, Pa.....	1889

HORNADAY, W. T., N. Y. Zoölogical Park, New York City	1888
HORTON, Mrs. FRANCES B., Brattleboro, Vt.	1900
HOWARD, OZORA WILLIAM, Los Angeles, Cala.	1898
HOWE, CARLTON D., McIndoe Falls, Vt.	1901
HOWE, REGINALD HEBER, Jr., Longwood, Brookline, Mass.	1895
HOWELL, ARTHUR H., Dept. of Agriculture, Washington, D. C.	1889
HUBBARD, GEORGE W., 94 Byers St., Springfield, Mass.	1900
HUBBARD, Miss MARGARET TUESDALE, Minneapolis, Minn.	1899
HUBBARD, Mrs. SARA A., 177 Woodruff Av., Flatbush, N. Y.	1891
HUGHES, Dr. WILLIAM E., 3945 Chestnut St., Philadelphia, Pa.	1891
HULL, WALTER B., Box 1234, Milwaukee, Wis.	1889
HUNN, JOHN T. SHARPLESS, 1218 Prospect Av., Plainfield, N. J.	1895
HUNTER, Miss SUSAN MORRISON, 51 Hunter Av., Newport, R. I.	1894
HUNTER, W. D., Victoria, Texas.	1899
INGALLS, CHARLES E., East Templeton, Mass.	1885
INGERSOLL, ALBERT M., 818 5th St., San Diego, Cala.	1885
IRVING, JOHN, 550 Park Av., New York City.	1894
IRWIN, HARDIN, Great Falls, Montana.	1901
ISHAM, C. B., 30 E. 63d St., New York City.	1891
JACKSON, THOMAS H., 343 E. Biddle St., West Chester, Pa.	1888
JACOBS, J. WARREN, Waynesburg, Pa.	1889
JAMES, Miss ANNIE A., Loveland, O.	1900
JANNEY, NATHANIEL E., 112 Drexel Bldg., Philadelphia, Pa.	1899
JESURUN, Dr. MORTIMER, Douglas, Wyoming.	1890
JOHNSON, EVERETT EDWIN, East Hebron, Me.	1896
JOHNSON, FRANK EDGAR, 747 Warburton Av., Yonkers, N. Y.	1888
JOHNSON, JAMES HOWARD, So. Sutton, N. H.	1894
JOHNSON, WALTER ADAMS, 137 W. 103d St., New York City.	1898
JOHNSON, WILLIAM S., Boonville, N. Y.	1893
JORDAN, A. H. B., Lowell, Wash.	1888
JUDD, ELMER T., Cando, No. Dakota.	1895
KEAYS, JAMES EDWARD, 41 Oxford St. W., London, Ont.	1899
KELKER, WILLIAM A., Box 114, Harrisburg, Pa.	1896
KELLOGG, Prof. VERNON L., Stanford University, Cala.	1888
KENDALL, Dr. WILLIAM C., U. S. Fish Comm., Washington, D. C.	1886
KENNARD, FREDERICK HEDGE, Brookline, Mass.	1892
KEYSER, LEANDER S., D. D., 723 So. 5th Av., Atchison, Kan.	1891
KING, GEORGE GORDON, 16 E. 84th St., New York City.	1888
KING, LE ROY, 20 E. 84th St., New York City.	1901
KIRKWOOD, FRANK C., 1811 Maryland Av., Baltimore, Md.	1892
KNETSCH, ROBERT, Nunda, Ill.	1898
KNIGHT, ORA WILLIS, 84 Forest Av., Bangor, Me.	1893
KNOLHOFF, FERDINAND WILLIAM, 28 Winans St., East Orange, N. J.	1897
KNOWLTON, F. H., U. S. Nat. Mus., Washington, D. C.	1883
KNOX, JOHN C., 14 State St., Auburn, N. Y.	1897
KNOX, JOHN COWING, Jackson, Minn.	1899

KOBBÉ, WILLIAM H., Biltmore, N. C.....	1898
KOCH, Prof. AUGUST, Williamsport, Pa.....	1891
KOCH, FREDERIC W., Berkeley, Cala.....	1891
KOHN, GUSTAVE, 136 Carondelet St., New Orleans, La.....	1886
KOPMAN, HENRY HAZLITT, New Iberia, La.....	1899
KOUMLY, Rev. PIRMINÉ M., St. Benedict's College, Atchison, Kans ..	1892
KUMLIEN, LUDWIG, Milton, Wis.....	1895
LACEY, HOWARD GEORGE, Kerrville, Texas.....	1899
LADD, SAMUEL B., Westchester, Pa.....	1889
LANO, ALBERT, Aitkin, Minn.....	1890
LANTZ, Prof. DAVID ERNEST, Agl. Experiment Station, Manhattan. Kans.....	1885
LATIMER, Miss CAROLINE P., 63 Remsen St., Brooklyn, N. Y.....	1898
LEE, Miss MARY, 241 W. Seymour St., Germantown, Pa.....	1898
LEUTLOFF, HERMAN C. A., 626 E. 135th St., New York City.....	1896
LEVERING, THOMAS HENRY, 1814 Belmont Ave., Washington, D. C.....	1898
LEVERSON, Dr. MONTAGUE R., 81 Lafayette Ave., Brooklyn, N. Y...	1901
LIBBY, ORIN GRANT, 302 Murray St., Madison, Wis.....	1900
LLOYD, ANDREW JAMES, 310 Boylston St., Boston, Mass.....	1900
LONG, HORACE B., 14 Anna St., Worcester, Mass.....	1889
LOOMIS, JOHN A., Paint Rock, Concho Co., Texas.	1887
LORD, Rev. WM. R., 9 Park St., Boston, Mass.....	1901
LORING, J. ALDEN, Owego, New York.....	1889
LOWBER, Miss EMMA WORRELL, 2045 Locust St., Philadelphia, Pa...	1898
LOWE, WILLOUGHBY P., Okehampton, Devon, England.....	1893
LOWELL, RACHEL, Worcester, Mass.....	1901
LUDLAM, CHRISTOPHER, Ocean City, Md.....	1900
MACDOUGALL, GEORGE R., 131 W. 73rd St., New York City.....	1890
MAYNARD, HENRY W., 1407 15th St., N. W., Washington, D. C....	1901
MADDOCK, Miss EMELINE, 2025 DeLancey Pl., Philadelphia, Pa.....	1897
MAIRES, Dr. WALTER W., 939 N. 12th St., Philadelphia, Pa.....	1899
MAITLAND, ROBERT L., 35 Nassau St., New York City.....	1889
MARSH, DANIEL J., Springfield, Mass.....	1894
MASTERMAN, ELMER ELLSWORTH, New London, Ohio.....	1895
MATHEWS, Miss CAROLINE, Waterville, Me.....	1898
McCLINTOCK, NORMAN, Amberson Av., Pittsburgh, Pa	1900
McCOOK, PHILIP JAMES, 32 E. 45th St., New York City.....	1895
McCORMICK, Miss ELIZA, 101 No. Front St., Harrisburg, Pa.....	1900
McEWEN, DANIEL C., 160 Stirling Pl., Brooklyn, N. Y.....	1901
McHATTON, Dr. HENRY, Macon, Ga.....	1898
McILHENNY, EDWARD AVERY, Avery's Island, La.....	1894
McKECHNIE, FREDERICK BRIDGHAM, Ponkapog, Mass.....	1900
McLAIN, ROBERT BAIRD, cor. Market & 12th Sts., Wheeling, W. Va..	1893
McNULTY, HENRY A., Gen. Theol. Seminary, Chelsea Sq., N. Y. City.	1900
MEARNS, LOUIS DI ZEREGA, Fort Yellowstone, Wyo.....	1899
MEEKER, JESSE C. A., 746 E. Main St., Bridgeport, Conn.....	1899

MERRILL, HARRY, Bangor, Maine.....	1883
MICKLE, THOMAS MCK., Charlotte, N. C.....	1900
MILLER, Frank M., 203 Hennen Bldg., New Orleans, La.....	1901
MILLER, GERRIT SMITH, Jr., U. S. Nat. Mus., Washington, D. C....	1886
MILLER, JAMES HENRY, Lowville, N. Y.....	1894
MILLER, Miss MARY MANN, 827 De Kalb Ave., Brooklyn, N. Y.....	1898
MILLER, WALDRON DE WITT, Plainfield, N. J.....	1896
MILLS, HARRY C., Unionville, Conn.....	1897
MILLS, Prof. WILLIAM C., State Univ., Columbus, O.....	1900
MITCHELL, Mrs. MINA BAKER, Care of Plow Co., Chattanooga, Tenn.....	1898
MITCHELL, WALTON I., 1721 Mt. Vernon St., Philadelphia, Pa.....	1893
MINEHAN, D., 459 Main St., Buffalo, N. Y.....	1901
MONTGOMERY, THOMAS H., Jr., Univ. Pennsylvania, Phila., Pa.....	1899
MOON, JOACHIM RICHARD, 934 Broadway, Camden, N. J.....	1898
MOORE, Miss E. PUTNAM, 70 W. 11th St., New York City.....	1901
MOORE, ROBERT THOMAS, Haddonfield, N. J.....	1898
MOORE, WILLIAM HENRY, Scotch Lake, New Brunswick.....	1900
MORCOM, G. FREAN, 512 Coronado St., Los Angeles, Cal.....	1886
MORRIS, GEORGE SPENCER, Olney, Philadelphia, Pa.....	1887
MORRIS, ROBERT O., Springfield, Mass.....	1888
MORSE, GEORGE W., Ashley, Ind.....	1898
MORTON, HOWARD McILVAIN, 316 Clifton Av., Minneapolis, Minn.....	1900
MOSHER, FRANK H., 283 Pleasant St., Malden, Mass.....	1898
MYERS, Miss LUCY F., "Brookside," Poughkeepsie, N. Y.....	1898
NASH, HERMAN W., Pueblo, Colorado.....	1892
NELSON, JAMES ALLEN, 3818 Locust St., Philadelphia, Pa.....	1898
NEWMAN, STEPHEN M., D. D., 1818 M. St., N. W., Washington, D. C.....	1898
NICHOLAS, ROSS, Portland, Oregon.....	1901
NICHOLS, JNO. TREADWELL, 26 Little's Block, Cambridge, Mass.....	1901
NICHOLS, JOHN M., Portland, Me.....	1890
NICHOLSON, RICHARD R., Winnipeg, Manitoba.....	1900
NORRIS, Rev. JAMES AVERY, Glen Cove, N. Y.....	1894
NORRIS, J. PARKER, 723 Walnut St., Philadelphia, Pa.....	1886
NORTON, ARTHUR H., Westbrook, Maine.....	1890
NORTON, ARTHUR HENRY WHITELEY, San Antonio, Texas.....	1894
NORTON, Prof. RICHARD, "Shady Hill," Cambridge, Mass.....	1888
NOWELL, JOHN ROWLAND, Union College, Schenectady, N. Y.....	1897
O'CONNOR, HALDEMAN, 25 No. Front St., Harrisburg, Pa.....	1896
OGDEN, Dr. HENRY VINING, 141 Wisconsin St., Milwaukee, Wis.....	1897
OLDS, HENRY WORTHINGTON, Dept. of Agriculture, Washington, D. C.....	1896
OLCOTT, THEODORE F., 356 Union St., Brooklyn, N. Y.....	1901
OLIVER, HENRY KEMBLE, 2 Newbury St., Boston, Mass.....	1900
O'NEIL, EDWARD, Sewickley, Allegheny Co., Pa.....	1893
OSBORN, CHASE SALMON, Sault Ste. Marie, Mich.....	1893
OSBURN, RAYMOND CARROLL, Fargo College, Fargo, N. D.....	1899
OSBURN, Rev. WILLIAM, Belmont Av., Station K, Cincinnati, O.....	1890

OSGOOD, HENRY W., Pittsfield, N. H.....	1901
OWEN, Miss JULIETTE AMELIA, 306 No. 9th St., St. Joseph, Mo.....	1897
PAGE, Mrs. ALICE WILSON, Englewood, N. J.....	1896
PAINE, AUGUSTUS G., Jr., 311 W. 74th St., New York City.....	1886
PALMER, SAMUEL COPELAND, Swarthmore, Pa.....	1899
PARKER, WENDELL PHILIPS, 28 Freeland St., Worcester, Mass.....	1897
PATTEN, Mrs. JEANIE MAWRY, 2212 R St., N. W., Washington, D. C.....	1900
PEABODY, WILLIAM RODMAN, 13 Kirkland St., Cambridge, Mass.....	1890
PEARSON, T. GILBERT, Greensboro, N. C.....	1891
PERKINS, CHARLES E., Box 854, Hartford, Conn.....	1888
PETERSON, Prof. J. P., West Denmark, Polk Co., Wis.....	1885
PHELPS, Mrs. ANNA BARDWELL, Box 36, Northfield, Mass.....	1899
PHILLIPS, ALEX. H., Princeton, N. J.....	1891
PIERCE, A. K., Renovo, Pa.....	1891
PLIMPTON, Prof. GEORGE L., Tilton, N. H.....	1900
POE, Miss MARGARETTA, 1500 Park Ave., Baltimore, Md.....	1899
POMEROY, HARRY KIRKLAND, Kalamazoo, Mich.....	1894
POOLE, ALFRED D., Wilmington, Delaware.....	1901
POPE, T. EDMUND B., 20 Hawthorne St., Providence, R. I.....	1901
PORTER, LOUIS H., Stamford, Conn.....	1893
POTTER, RAYMOND B., Box 491, Nyack, N. Y.....	1895
PRAEGER, WILLIAM E., Streator, Ill.....	1892
PROCTOR, Miss MARY A., Franklin Falls, N. H.....	1900
PURDUM, Dr. C. C., Pawtucket, R. I.....	1901
PURDY, JAMES B., Plymouth, Mich.....	1893
RANN, Mrs. MARY L., Manchester, Iowa.....	1893
RATHBUN, SAMUEL F., 217 14th Ave., N., Seattle, Washington.....	1901
RAWSON, CALVIN LUTHER, Box 33, Norwich, Conn.....	1885
READ, ALBERT M., 1140 15th St., N. W., Washington, D. C.....	1895
READY, GEORGE HENRY, Santa Cruz, Cala.....	1900
REAGH, Dr. ARTHUR LINCOLN, 39 Maple St., West Roxbury, Mass.....	1896
REDFIELD, Miss ELISA WHITNEY, 107 No. 34th St., Philadelphia Pa.....	1897
REDINGTON, ALFRED POETT, Santa Barbara, Cala.....	1890
REED, J. HARRIS, Aldan, Pa.....	1890
REED, HUGH DANIEL, Cornell Univ., Ithaca, N. Y.....	1900
REHN, JAMES A. G., Acad. of Nat. Sciences, Philadelphia, Pa.....	1901
REYNOLDS, Mrs. JNO. R., Poughkeepsie, N. Y.....	1901
RHOADS, CHARLES J., Bryn Mawr, Pa.....	1895
RICHARDS, Miss HARRIET E., Brookline, Mass.....	1900
RICHARDS, JOHN BION, Fall River, Mass.....	1888
RICHARDSON, JOHN KENDALL, Wellesley Hills, Mass.....	1896
RICKER, EVERETT WILDER, 263 Chestnut Ave., Jamaica Plains, Mass.....	1894
RIDGWAY, JOHN L., U. S. Geol. Surv., Washington, D. C.....	1890
RIKER, CLARENCE B., Maplewood, N. J.....	1885
RILEY, JOSEPH H., Falls Church, Va.....	1897
RITCHIE, SANFORD, Dover, Me.....	1900

ROBBINS, REGINALD C., 373 Washington St., Boston, Mass	1901
ROBINS, Mrs. JULIA STOCKTON, 114 S. 21st St., Philadelphia, Pa.....	1895
ROBERTS, Miss ETHEL DANE, 78 Pittsburg Av., Wooster, Ohio.....	1899
ROBERTSON, HOWARD, Station A, Los Angeles, Cala.....	1901
RODDY, Prof. H. JUSTIN, State Normal School, Millersville, Pa.....	1891
ROOSEVELT, FRANKLIN DELANO, Hyde Park, N. Y.....	1896
ROOSEVELT, Hon. THEODORE, White House, Washington, D. C.....	1888
ROTZELL, Dr. W. E., Narberth, Pa.....	1893
ROWLAND, Mrs. ALICE STORY, Public Library, Plainfield, N. J.....	1897
ROWLEY, JOHN, Jr., Am. Mus. Nat. Hist., New York City.....	1889
SAGE, HENRY M., care of H. S. Sage & Co., Albany, N. Y.....	1885
SAMPSON, WALTER BEHRNARD, 921 No. Monroe St., Stockton, Cala.....	1897
SARGENT, HARRY CLEVELAND, Chocorua, N. H.....	1900
SAVAGE, JAMES, 134 Abbott St., Buffalo, N. Y.....	1895
SAVAGE, WALTER GILES, Jasper City, Mo.....	1898
SCHALER, JOHN, Stamford, Conn.....	1893
SCHMITT, Dr. Jos., Laval Univ., Quebec, Canada.....	1901
SCHOENEBECK, AUGUST JOHN, Kelley Brook, Wis.....	1898
SCHRAFFT, NELSON, Union Ave., Irvington, N. J.....	1901
SCHURR, Prof. THEODORE A., 14 Lake St., Pittsfield, Mass.....	1888
SCHWAB, Rev. LAWRENCE H., 549 W. 156th St., New York City.....	1892
SEALE, ALVIN, Bishop Mus., Honolulu, H. I.....	1900
SEISS, COVINGTON FEW, 1338 Spring Garden St., Philadelphia, Pa.....	1898
SHATTUCK, EDWIN HAROLD, Granby, Conn.....	1898
SHATTUCK, GEORGE CHEEVER, 135 Marlboro St., Boston, Mass.....	1896
SHAW, HOLTON A., Grand Forks, No. Dakota.....	1898
SHAW, LOUIS AGASSIZ, Chestnut Hill, Mass.....	1901
SHELDON, CHARLES, Apartado 46, Chihuahua, Mexico.....	1898
SHEPARD, MARSHALL, 134 W. 73d St., New York City.....	1899
SHEPPARD, EDWIN, Acad. Nat. Sci., Philadelphia, Pa.....	1892
SHERRILL, W. E., Haskell, Texas.....	1896
SHIELDS, ALEXANDER M., Crocker Bldg., San Francisco, Cala.....	1896
SHIELDS, GEORGE O., 23 W. 24th St., New York City.....	1897
SHOEMAKER, FRANK H., Omaha, Neb.....	1895
SHOVE, ELLEN MARIAN, Fall River, Mass.....	1900
SHROSBREE, GEORGE, 321 14th St., Milwaukee, Wis.....	1899
SHRYOCK, WILLIAM A., 21 N. 7th St., Philadelphia, Pa.....	1893
SILLOWAY, PERLEY MILTON, Lewiston, Mont.....	1896
SLEVIN, THOMAS EDWARDS, 2413 Sacramento St., San Francisco, Cala.....	1900
SMITH, CHARLES PIPER, 246 So. Grant St., West Lafayette, Ind.....	1898
SMITH, HORACE G., 2918 Lafayette St., Denver, Colo.....	1888
SMITH, Dr. HUGH M., 1248 New Jersey Ave., Washington, D. C.....	1886
SMITH, LOUIS IRVIN, Jr., 3908 Chestnut St., Philadelphia, Pa.....	1901
SMITH, Mrs. J. EDWIN, 423 James St., Syracuse, N. Y.....	1901
SMITH, ROBERT WINDSOR, Kirkwood, Ga.....	1895

SMITH, THEODORE H., 22 Essex Ave., Orange, N. J.....	1896
SMITH, S. SIDNEY, 59 Wall St., New York City.....	1888
SMYTH, Prof. ELLISON A., Jr., Polytechnic Inst., Blacksburg, Va.....	1892
SNYDER, WILL EDWIN, Beaver Dam, Wis.....	1895
SOUTHWICK, JAMES M., Mus. Nat. Hist., Providence, R. I.....	1896
SPAUD, Prof. ARTHUR R., 1819 Delaware Ave., Wilmington, Del.....	1901
SPAULDING, FRED B., Lancaster, N. H.....	1894
SPINNEY, HERBERT L., Popham Beach, Me.....	1900
STACK, FREDERICK WILLIAM, Plainfield, N. J.....	1900
STANTON, Prof. J. Y., Bates College, Lewiston, Me.....	1883
STEPHENSON, Mrs. LOUISE MCGOWN, Helena, Ark.....	1894
STONE, CLAYTON ELBERT, Lunenburg, Mass.....	1899
STONE, DWIGHT D., Lansing, N. Y.....	1891
STRONG, REUBEN M., Haverford, Pa.....	1889
STURTEVANT, EDWARD, St. George School, Newport, R. I.....	1896
SWAIN, JOHN MERTON, 319 Commercial St., Portland, Me.....	1899
SWARTH, HARRY S., 512 Coronado St., Los Angeles, Cal.....	1900
SWEZEY, GEORGE, 66 Jackson St., Newark, N. J.....	1901
TALLEY, Prof. THOMAS WASHINGTON, Tuskegee, Ala.....	1896
TAYLOR, ALEXANDER O'DRISCOLL, 124 Bellevue Ave., Newport, R. I.....	1888
TEST, Dr. FREDERICK CLEVELAND, 4401 Indiana Ave., Chicago, Ill.....	1892
THAYER, JOHN ELIOT, Lancaster, Mass.....	1898
THOMAS, Miss EMILY HINDS, "Hindsbury," Bryn Mawr, Pa.....	1901
THOMPSON, Miss CAROLINE B., Germantown, Philadelphia, Pa.	1900
TODD, LOUIS M., Calais Me.....	1887
TOPPAN, GEORGE L., 321 Main St., Racine, Wis.....	1886
TOWNSEND, Dr. CHAS. WENDELL, 76 Marlborough St., Boston, Mass.....	1901
TOWNSEND, WILMOT, 3d Av. and 75th St., Bay Ridge, N. Y.....	1894
TREAT, WILLARD E., Silver Lane, Conn.....	1885
TROTTER, WILLIAM HENRY, 36 No. Front St., Philadelphia, Pa.....	1899
TUTTLE, Dr. CARL, Berlin Heights, Ohio.....	1890
UNDERWOOD, WILLIAM LYMAN, Mass. Inst. Technology, Boston, Mass.....	1900
VAN CORTLANDT, Miss ANNE S., Croton-on-Hudson, N. Y.....	1885
VAN DENBURGH, Dr. JOHN, Los Gatos, Cal.....	1893
VAN NAME, WILLARD GIBBS, 121 High St., New Haven, Conn.....	1900
VAN NORDEN, WARNER MONTAGNIE, Rye, New York.....	1899
VAN SANT, Miss ELIZABETH, Omaha, Neb.....	1896
VARICK, Mrs. JOHN B., Manchester, N. H.....	1900
VETTER, Dr. CHARLES, Jr., 152 Second St., New York City.....	1898
WALCOTT, ROBERT, 11 Waterhouse St., Cambridge, Mass.....	1893
WALES, EDWARD H., Hyde Park, N. Y.....	1896
WALKER, Dr. R. L., 94 Main St., Carnegie, Pa.....	1888
WALTER, HERBERT E., 435 Belden Ave., Chicago, Ill.....	1901
WARREN, Dr. B. H., Box 245, Westchester, Pa.....	1885
WATERMAN, WILLIAM, Bigelow, Minn.....	1896
WATERS, EDWARD STANLEY, Water Power Co., Holyoke, Mass.....	1894

WATSON, Miss SARAH R., 5128 Wayne St., Germantown, Phil., Pa.	1900
WATTERS, ROBINSON CATOR, 9 W. Baltimore St., Baltimore, Md.	1900
WEBSTER, Mrs. ELLEN EMELINE, Franklin Falls, N. H.	1898
WEBSTER, Mrs. MARY P., 1025 5th St., S. E. Minneapolis, Minn.	1900
WEIR, J. ALDEN, 11 E. 12th St., New York City	1899
WENTWORTH, IRVING H., Matehuala E. de S. L. P., Mexico	1900
WEST, LEWIS H., Roslyn, Nassau Co., N. Y.	1887
WETHERILL, WM. H., 126 So. 30th St., Philadelphia, Pa.	1901
WHEELER, EDMUND JACOB, 95 Jefferson Av., New London, Conn.	1898
WHEELER, JOHN B., East Templeton, Mass.	1897
WHITCOMB, Mrs. ANNABELL C., 721 Franklin St., Milwaukee, Wis.	1897
WHITE, FRANCIS BEACH, 6 Phillips Place, Cambridge, Mass.	1891
WHITMAN, Prof. CHARLES OTIS, Univ. of Chicago, Chicago, Ill.	1896
WICKS, M. L., Jr., 221 W. 2d St., Los Angeles, Cal.	1890
WILBUR, ADDISON P., 4 Gibson St., Canandaigua, N. Y.	1895
WILCOX, T. FERDINAND, 115 W. 75th St., New York City	1895
WILDE, MARK L. C., Camden, N. J.	1893
WILLIAMS, J. BICKERTON, 15 Wellington St. E., Toronto, Can.	1889
WILLIAMS, ROBERT STATHAM, Botanical Gardens, New York City	1888
WILLIAMS, ROBERT WHITE, Jr., Tallahassee, Fla.	1900
WILLIAMS, W. J. B., Holland Patent, N. Y.	1893
WILLIAMSON, E. B., Bluffton, Ind.	1900
WILSON, JAMES FRANKLIN, Basin, Montana	1901
WILSON, SIDNEY S., 1021 Sylvania St., St. Joseph, Mo.	1895
WINKENWERDER, HUGO AUGUST, 217 Murray St., Madison, Wis.	1900
WOLCOTT, Dr. ROBERT H., Univ. of Neb., Lincoln, Nebraska	1901
WOLFE, WILLIAM EDWARD, Florence, Colo.	1900
WOOD, Dr. HOWARD L., Groton, Conn.	1901
WOOD, NELSON R., Smithsonian Institution, Washington, D. C.	1895
WOODCOCK, ARTHUR ROY, Corvallis, Oregon	1901
WOODRUFF, EDWARD SEYMOUR, 14 E. 68th St., New York City	1899
WOODRUFF, LEWIS B., 14 E. 68th St., New York City	1886
WOODWARD, Dr. LEMUEL F., 52 Pearl St., Worcester, Mass.	1901
WOODWORTH, Mrs. NELLY HART, 41 Bank St., St. Albans, Vt.	1894
WORCESTER, Prof. DEAN C., U. S. Philippine Comm., Manila, P. I.	1895
WORTHEN, CHARLES K., Warsaw, Ill.	1891
WORTHINGTON, WILLIS W., Shelter Island Heights, Suffolk Co., N. Y.	1889
WRIGHT, FRANK S., 51 Genesee St., Auburn, N. Y.	1894
WRIGHT, Miss NORA GIRALDA, 387 Plainfield St., Olneyville, R. I.	1896
WRIGHT, SAM, Conshohocken, Pa.	1895
YORKE, Dr. F. HENRY, Foosland, Ill.	1891

DECEASED MEMBERS

FELLOWS

Date of Death

BAIRD, SPENCER FULLERTON.....	Aug. 19, 1887
BENDIRE, CHARLES E.....	Feb. 4, 1897
COUES, ELLIOTT.....	Dec. 25, 1899
GOSS, N. S.....	March 10, 1891
HOLDER, JOSEPH B.....	Feb. 28, 1888
JEFFRIES, JOHN AMORY.....	March 26, 1892
SENNETT, GEORGE BURRITT.....	March 18, 1900
WHEATON, JOHN M.....	Jan. 28, 1887

HONORARY FELLOWS.

BURMEISTER, HERMANN.....	May 1, 1892
GÄTKE, HEINRICH.....	Jan. 1, 1897
GUNDLACH, JUAN.....	March 14, 1896
GURNEY, JOHN HENRY.....	April 20, 1890
HARTLAUB, GUSTAV.....	Nov. 20, 1900
HUXLEY, THOMAS H.....	June 29, 1895
KRAUS, FERDINAND.....	Sept. 15, 1890
LAWRENCE, GEORGE N.....	Jan. 17, 1895
MILNE-EDWARDS, ALPHONSE.....	April 21, 1900
PARKER, WILLIAM KITCHEN.....	July 3, 1890
PELZELN, AUGUST VON.....	Sept. 2, 1891
SALVIN, OSBERT.....	June 1, 1898
SCHLEGEL, HERMANN.....	Jan. 17, 1884
SEEBOHM, HENRY.....	Nov. 26, 1895
TACZANOWSKI, LADISLAS.....	Jan. 17, 1890

CORRESPONDING FELLOWS.

ALTUM, C. A.....	Jan. 1, 1900
ANDERSON, JOHN.....	Aug. 16, 1900
BALDAMUS, EDUARD.....	Oct. 30, 1893
BLAKISTON, THOMAS W.....	Oct. 15, 1891
BOGDANOW, MODEST N.....	March 4, 1888
COOPER, JAMES G.....	July 19, 1902
CORDEAUX, JOHN.....	Aug. 1, 1899
DAVID, ARMAND.....	Nov. 10, 1900

Deceased Members.

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HAAST, JULIUS VON.....	Aug. 15, 1887
HARGITT, EDWARD.....	March 19, 1895
HOLUB, EMIL.....	Feb. 21, 1902
HOMeyer, E. F. VON.....	May 31, 1889
LAYARD, EDGAR LEOPOLD.....	Jan. 1, 1900
LONGSCHAMPS, EDMOND DE SELYS.....	Dec. 11, 1900
LYTTLETON, THOMAS, LORD LILFORD.....	June 17, 1896
MARSCHALL, A. F.....	Oct. 11, 1887
MALMGREN, ANDERS JOHAN.....	April 12, 1897
MIDDENDORFF, ALEXANDER THEODOR VON.....	Jan. 28, 1894
MOSJISOVICS, F. G. HERMANN AUGUST.....	Aug. 27, 1897
PREJEVALSKI, N. M.....	Oct. 20, 1887
PRENTISS, D. WEBSTER.....	Nov. 19, 1899
PRYER, HARRY JAMES STOVIN.....	Feb. 17, 1888
SCHRENCK, LEOPOLD VON.....	Jan. 20, 1894
SÉLEYS-LONGSCHAMPS, EDMOND DE.....	Dec. 11, 1900
SEVERTZOW, N.....	Feb. 8, 1885
STEVENSON, HENRY.....	Aug. 18, 1888
WHARTON, HENRY T.....	Sept. —, 1895

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MEAD, George S.	June 19, 1901
MINOT, HENRY DAVIS	Nov. 13, 1890
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THORNE, PLATTE M.	March 16, 1897
THURBER, E. C.	Sept. 6, 1896
VENNOR, HENRY G.	June 8, 1884
WILLARD, SAMUEL WELLS	May 24, 1887
WOOD, WILLIAM	Aug. 9, 1885
YOUNG, CURTIS C.	July 30, 1902





Photomicro.

John H. Hutton & Sons, Boston.

AMERICAN HERRING GULL (*LARUS ARGENTATUS SMITHSONIANUS*).

Photographed at the protected colony on Great Duck Island, Maine.

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No. 1.

NESTING HABITS OF THE ANATIDÆ IN NORTH DAKOTA.

BY A. C. BENT.

Plates II-IV.

(Continued from Vol. XVIII, p. 336.)

Nettion carolinensis Gmel. GREEN-WINGED TEAL.

THIS handsome little duck is probably the rarest of the Anatidæ breeding in North Dakota. We did not see a single individual which we could identify as of this species, so I have nothing to add to its life history from personal experience. In the extreme northern portions of the State it is probably more often found breeding. Mr. Job met with it there, on his previous visit in 1898, and I quote from his notes in regard to it, as follows: "On June 20, near Rolla, I was exploring a small pond with rushes around the edges. While wading at the outer edge of the rushes, I heard some pattering sounds, and from almost at my feet eight tiny ducklings followed one another in a line out into the open water. In a moment the mother was on hand, and flapped and dragged herself about, almost within arm's reach of me. The young swam into the rushes again, and the old bird kept up the performance as long as I staid there, flying off and coming back to renew her protestations."

Querquedula discors Linn. BLUE-WINGED TEAL.

This little duck is one of the commonest ducks in North Dakota, possibly the commonest, rivaling in this respect the Pintail and Shoveller, both of which are very abundant.

It is a widely and evenly distributed species, being equally abundant in all parts of the region we visited; we met with it around the shores of all the larger lakes, and could always count on starting one or more pairs from every slough or pond hole that we visited, even the very smallest ones, though they were nowhere congregated in colonies of any size, as were many of the other species. But, in spite of their universal abundance, we were remarkably unsuccessful in finding their nests. Though we spent considerable time hunting for them in suitable localities we succeeded in finding only one nest.

Mr. Job, however, in 1898, found more nests of this species than any other species of duck, and I cannot account for our failure to find them unless possibly we were too early for them. Most of the birds we saw were swimming about or flying about in pairs, which would seem to indicate that incubation had not yet begun, as, after the females begin to incubate, the males usually desert them and congregate in small flocks by themselves.

The nests of the Blue-winged Teal are generally well concealed in the long prairie grass growing around the borders of the sloughs and small pond holes, almost always on dry ground, not far from the water, but sometimes in moist meadows bordering such places, where the grass grows long and thick enough to conceal them. They also nest sparingly on the islands in the large lakes with the Baldpates and Lesser Scaup Ducks.

On June 12, while hunting through some extensive wet meadows near the source of the Goose River in Steel County, not over twenty yards from the river, I flushed a Blue-winged Teal from her nest in a clump of rather tall grass, in an open place, where the dead grass had been beaten down quite flat; the nest was well concealed from view, made of dead grass mingled with a little down, and contained ten perfectly fresh eggs. Undoubtedly, more down would have been added to the nest as incubation advanced, as this is the almost invariable rule with all the ducks,

and as incubated sets of this species are generally plentifully supplied with down, which is sometimes sufficient to conceal the eggs completely.

The ten eggs in this set are fairly typical of the species, of a dull, light cream color, considerably nest-stained, ovate to elliptical ovate in shape, and exhibiting the following measurements: length, 1.95 to 1.86; breadth, 1.43 to 1.38; average, 1.89 by 1.41.

***Spatula clypeata* (Linn.).** SHOVELLER.

The first duck that I saw in North Dakota was a Shoveller flushed from a small slough near the railroad track as we entered the State, and from that time on we saw Shovellers every day in all parts of the region we visited. It is one of the commonest ducks, and is evenly distributed everywhere. The brilliant, striking plumage of the male and the long, broad bill of the female serve to distinguish them at a glance from other species of ducks. They frequent the same localities as the Blue-winged Teal, are equally tame, and probably lay their eggs at about the same time as this species. We found only two nests of the Shoveller, in spite of their universal abundance. From the fact that we frequently saw them flying about in pairs, I inferred that many of them do not complete their sets before June 15, which would make this one of the later laying species. After the sets are completed the males associate with the Mallards and Pintails in the smaller ponds and open sloughs. Nearly every slough, meadow, or pond hole that we visited contained one or more pairs of these handsome little ducks. The charm of collecting and studying birds in this highly favored region is greatly enhanced by constantly flushing this and the other numerous species of ducks from every favorable locality. We were kept in a constant state of delightful expectancy, and were seldom disappointed.

The nesting ground of the Shoveller is the broad expanse of virgin prairie, often far away from the nearest water, sometimes on high, dry ground and sometimes in moist meadow land or near a slough or pond. The first nest that we found was in the center of a hollow in the prairie between two knolls, where the ground was moist but not actually wet, and where the grass grew thick

and luxuriantly. The nest was well hidden in the thick, green grass, so that we never should have found it if we had not flushed the bird within ten feet of us. It was merely a depression in the ground, well lined with dry grasses, and sparingly lined with gray down around the eggs; more down would probably have been added as incubation advanced. The ten eggs which it contained were perfectly fresh when collected on June 3.

The second nest was found on June 7 while driving across the prairie in Nelson County. We had stopped to explore an extensive tract of low 'badger brush,' looking for the nest of a pair of Short-eared Owls which were flying about, as if interested in the locality. We were apparently a long distance from any water, and, while returning to our wagon over a high, dry knoll, flushed the duck from her nest, which was only partially concealed in the short prairie grass. The slight hollow in the ground was lined with dead grasses and a plentiful supply of down. It contained eleven eggs which were too far advanced in incubation to save. I photographed this nest, which is shown in Plate II, Fig. 1. The eggs of the Shoveller are quite similar in color to either the Mallard's or the Pintail's, being very pale olive buff or very pale greenish gray, and having smooth, thin shells with very little lustre; they are, however, decidedly smaller than those of either of the above species; in shape they are nearly elliptical ovate. The eggs of these three species are very much alike in color and texture, but they can generally be distinguished by the shape and size.

The measurements of the first set described above are as follows: length 2.17 to 1.95; breadth, 1.44 to 1.40; average, 2.03 by 1.42.

Dafila acuta (Linn.). PINTAIL.

Judging from our experience, I should call the Pintail the most universally abundant duck in North Dakota, although the Blue-winged Teal, the Shoveller, and, possibly, the Mallard, are close rivals in this respect.

All four of these species are evenly distributed throughout the prairie regions, and are almost sure to be met with in nearly every

lake, pond or slough of any size. We certainly saw Pintails everywhere in both Nelson and Steele Counties, and often found the males congregated in flocks, together with Mallards and Shovellers, in the open sloughs or small ponds, from which they would rise at long range, as we approached, and fly off high up in the air.

The Pintail is an early breeder, beginning to lay early in May; and probably the majority of the broods are hatched by the first week in June. We came across several females with broods of young, and saw some remarkable examples of parental devotion and solicitude, which are very strongly developed in this species.

On June 3 we visited a small slough, in Nelson County, with open water in the centre, from which we started quite a flock of Mallards and Pintails as we approached, and, as we waded out into the marsh, a female Pintail flew towards us, dropped into the water near us, and began splashing about in a state of great excitement. The young ducks were probably well hidden among the reeds, though we could not see or hear them. During all the time, for an hour or more, that we were wading around the little slough that Pintail watched us and followed us closely, flying about our heads and back and forth over the slough, frequently splashing down into the water near us in the most reckless manner, swimming about in small circles or splashing along the surface of the water, as if wounded, and often near enough for us to have hit her with a stick, quacking excitedly all the time. I never saw a finer exhibition of parental devotion than was shown by her total disregard of her own safety, which did not cease until we left the locality entirely. We had a somewhat similar experience near a small slough in Steele County, which resulted in our finding one of the young ducks hidden in the long, thick prairie grass.

The nests of the Pintail are placed almost any where on dry ground, sometimes near the edge of a slough or pond, sometimes on the islands in the lakes, but more often in the prairies, and sometimes a half a mile or more from the nearest water. The young are probably led to the nearest body of water as soon as they are hatched.

The nest is generally poorly concealed, and often in plain sight. A deep hollow is scooped out in the ground, which is sparingly lined with bits of straw and stubble, and a scanty lining

of down is deposited around the eggs. The eggs, which are usually from eight to ten in number, are quite similar to the Mallard's but are usually somewhat smaller, more elongated, and a little more glossy. The color is a pale olive green or a pale olive buff, and the shape an elliptical ovate.

The measurements of the only set before me are as follows: length, 2.36 to 2.13; breadth, 1.57 to 1.49; average, 2.28 by 1.53.

The first nest we found, on May 31, was concealed in rather tall prairie grass on the highest part of a small island in one of the larger lakes. We flushed the bird from almost under our feet, and easily identified her, as she flew away, by the long slender neck, uniformly light mottled upper parts and inconspicuous dark speculum. The absence of the conspicuous white-bordered purple speculum and the small size of the bill serve to separate it from the Mallard and the Shoveller, for which the eggs might possibly be mistaken, though the eggs of the latter are smaller. The nest was well lined with down and contained six eggs, apparently nearly fresh. We visited this nest again on June 15, and found the bird still incubating, no more eggs having been laid.

On June 15 we found another Pintail nest in an open situation among rather sparse but tall prairie grass, which was in plain sight, the eggs being beautifully concealed by a thick covering of down. Another nest was shown to us by some farmers who were ploughing up an extensive tract of prairie, and had flushed the bird as they passed within a few feet of the nest. This was fully half a mile from the nearest water. They left a narrow strip, containing the nest, unploughed, but something destroyed the eggs a few days afterwards.

The only set I was able to photograph or collect was found in Steele County, on June 10, and is shown in the accompanying photograph (Pl. II, Fig. 2).

While walking along the edge of a cultivated wheat field, close to the crest of a steep embankment sloping down into a large slough, we flushed a female Pintail from almost under our feet. The nest was a deep hollow in the bottom of a furrow, 7 inches wide by 4 inches deep, lined with bits of straw and weed stubble, with a moderate supply of down surrounding the eggs. It was very poorly concealed by the scanty growth of weeds around it.



FIG. 1. NEST AND EGGS SHOVELLER.



FIG. 2. NEST AND EGGS OF PINTAIL.

The eight eggs which it contained proved to be heavily incubated.

The eggs are fairly typical of the species, and measure as follows: length, 2.36 to 2.13; breadth, 1.57 to 1.49; average, 2.28 by 1.53.

The bird was quite demonstrative and solicitous, which seems to be characteristic of the species.

Aythya americana (Eyt.). REDHEAD.

We now come to the subfamily of sea ducks, three species of which, the Redhead, the Canvasback, and the Ruddy Duck, are exclusively slough breeders. The Redhead is by far the commonest of these three species, and probably far outnumbers any other species of this subfamily in North Dakota.

It is very common in all the larger sloughs, but was not found by us in any of the smaller sloughs, and was not, as far as I can remember, seen in any of the larger lakes, where it certainly does not breed.

We first met with it on June 3 in a large slough in Nelson County, where the water was not over knee deep, except in a few scattered open spaces, and where the reeds and flags were somewhat scattered and open. A pair of Canada Geese nested in this slough and two pairs of Marsh Hawks, but it was chiefly tenanted by Yellow-headed Blackbirds, Coots, and Long-billed Marsh Wrens. The Blackbirds fairly swarmed in this slough, and the constant din of their voices was almost bewildering, especially whenever one of the Marsh Hawks sailed out over the slough, which sent them all up into the air at once, cackling and squeaking, hovering and circling about for a few moments, and then settling down into the reeds again. Redheads were flying back and forth across the slough, Killdeers, Willets, and Wilson Phalaropes were flying about the shores, and Long-billed Marsh Wrens were singing among the flags on all sides. While wading along a shallow ditch through a small patch of last year's flags, a big brown duck sprang into the air from a clump of tall reeds, and, after a short search, I found my first nest of the Redhead, well concealed among the reeds. It was a handsome nest, well made of dead reeds, deeply hollowed and lined with broken pieces of the reeds mingled with consider-

able white down, especially around the upper rim ; it measured 16 inches in diameter outside and 8 inches inside, the upper part of the rim being about 10 inches above the water ; it rested on a bulky mass of dead reeds built up out of the shallow water, the whole structure being firmly held in place by the live growing reeds about it. It held eleven handsome eggs, in which incubation had just begun. I could not photograph this nest, as it was raining hard, but I collected the nest and eggs, which are now in my cabinet.

We found two more nests of the Redhead in this slough, one of which, found by Mr. Job, contained the unusually large number of twenty-two eggs, which were nearly ready to hatch. Large sets of this species are not uncommon, so that probably these eggs were all laid by the same bird. The third nest was similarly located, but not so well made as the first one. I flushed the bird from it in an area of rather open reeds where the water was not very deep. She flew back and forth across the slough several times, and was soon joined by her mate ; the pair then circled about in the vicinity as long as I remained near the nest, showing more solicitude than is customary with this species. The nest was a large one, measuring 18 inches in diameter ; it was a bulky mass of dead reeds built up out of the shallow water to a height of about 6 inches, and hollowed in the centre about 4 inches ; there was very little down used in its construction. The rim of the nest had been broken down on one side, probably by the hasty departure of the duck, so that several of the eggs had rolled out into the water. There were fifteen eggs in the set, which proved to be perfectly fresh.

We found the Redheads breeding in two large, deep sloughs in Steele County. One of these, in which we found four nests of the Redhead, is illustrated in the photograph (Pl. III, Fig. 1). In the open part of this slough, shown in the foreground, the water was too deep to wade, but, in the southern end of the slough, shown in the background, the water was seldom deeper than the tops of our hip boots, and in many places quite shallow. The principal growth was the tall slough reeds, quite thick in some places, and often as high as our heads, with numerous thick patches of tall cat-tail flags and several patches of the 'queen of the prairie'





FIG. 1. NESTING SITE OF CANVASBACKS AND REDHEADS.



FIG. 2. NEST AND EGGS OF REDHEAD.

reeds growing in the drier portions. The Redheads' nests were all located in the shallower parts of the slough where the reeds and flags were growing less thickly.

Pied-billed Grebes, Canvasbacks and Ruddy Ducks were nesting in this slough, as well as hundreds of Yellow-headed Blackbirds and Coots.

The Redheads' nests found here on June 10 contained six, ten, fourteen, and sixteen eggs respectively, none of which were collected. The latter of these is shown in the photograph (Pl. III, Fig. 2); it was located in the centre of a tangled mass of broken down dead flags, in a nearly dry, open space, near the edge of the slough, well concealed from view by the arching over of the dead flags above it. The bird proved to be a close sitter, as we twice flushed her from the nest. We tested one of the eggs and found it far advanced in incubation.

The Redhead seems to be particularly careless about laying its eggs in other ducks' nests. We found one of its eggs in a Ruddy Duck's nest in this slough, and in three cases found from three to four of its eggs in nests of the Canvasback, on which the latter duck was incubating; but we never found the eggs of any other species in the Redheads' nests.

The eggs of the Redhead can generally be distinguished from those of any other species, as they are usually quite different in color, size and texture. The shell is extremely hard and flinty, with a smooth, slightly glossy surface, and quite thick; it will dull the cutting edges of the best drills in a short time. In shape they vary from a somewhat rounded to a considerably elongated elliptical ovate, sometimes nearly oval.

In color they vary from a light olive buff, matching almost exactly certain types of Mallard's eggs, to a light cream buff. The eggs are larger than the Mallard's eggs, and the nest is entirely different, being made of dead reeds and lined with white down. The eggs are entirely different in color from those of the Canvasback, which builds a somewhat similar nest and in similar situations, but lines it with gray down.

The measurements of twenty-six eggs in my collection show the following figures: length, 2.63 to 2.31; breadth, 1.79 to 1.68; average, 2.45 by 1.72.

***Aythya vallisneria* (Wils.). CANVASBACK.**

The Canvasback is not one of the commonest species in North Dakota, and is restricted, during the breeding season at least, to certain favorable localities. The settlement of the country and the demands of agriculture have led to the draining and drying up of many of the large deep water sloughs, which tends to restrict the distribution of this species. A fine, large slough in Nelson County, where Mr. Job found the Canvasback breeding abundantly in 1898, is now entirely dried up, the birds having disappeared from that locality. I believe Dr. Bishop failed to find any nests of this species on his previous visit to Towner County, North Dakota, though several pairs of the birds were seen, and a local collector of considerable experience told me that he had never seen the nest of the Canvasback.

Our experience with this species was confined to two large deep sloughs in Steele County, where we found them breeding in fair numbers. I understand that there are some large sloughs in Eddy County where the Canvasbacks breed, and I have no doubt they can be found in suitable sloughs throughout all the northern portions of the State.

The principal object of our visit to the sloughs in Steele County was to study the breeding habits of the Canvasbacks, so, soon after our arrival here, late in the afternoon of June 7, we put on our hip boots and started in to explore the northern end of the big slough, shown in the photograph (Pl. III, Fig. 1), and referred to under my remarks on the Redhead. In the large area of open water we could see several male Canvasbacks and a few Redheads swimming about, well out of gun range. Wading out through the narrow strip of reeds surrounding the open water, and working along the outer edge of these, we explored first the small isolated patches of reeds shown in the foreground of the picture. The water here was more than knee deep, and in some places we had to be extremely careful not to go in over the tops of our boots, so that progress was quite slow. We had hardly been wading over ten minutes when, as I approached one of these reed patches, I heard a great splashing, and out rushed a large, light brown duck which, as she circled past me, showed very plainly the long sloping head and pointed bill of the Canvasback.

A short search in the thick clump of tall reeds soon revealed the nest with its eleven eggs, eight large, dark-colored eggs of the Canvasback and three smaller and lighter eggs of the Redhead. It was a large nest built upon a bulky mass of wet dead reeds, measuring 18 inches by 20 inches in outside diameter, the rim being built up 6 inches above the water, the inner cavity being about 8 inches across by 4 inches deep. It was lined with smaller pieces of dead reeds and a little gray down. The small patch of reeds was completely surrounded by open water about knee deep, and the nest was so well concealed in the center of it as to be invisible from the outside. The eggs were also collected on that day, and proved to be very much advanced in incubation.

The other nests of the Canvasback that we found were located in another slough about half a mile distant which was really an arm of a small lake separated from the main body of the lake by an artificial dyke or roadway with a narrow strip of reeds and flags on either side of it. In the large area thus enclosed the water was not much more than knee deep, except in a few open spaces where it was too deep to wade.

In another section of the slough, among open, scattered reeds, the Pied-billed Grebes were breeding abundantly. A few pairs of Ruddy Ducks had their nests well concealed among the tall thick reeds. Coots and Yellow-headed Blackbirds were there in almost countless numbers, Long-billed Marsh Wrens were constantly heard among the tall thick flags, Red-winged Blackbirds, Soras and Virginia Rails were nesting abundantly in the short grass around the edges. Marbled Godwits and Western Willets were frequently seen flying back and forth over the marshes, acting as if their nests were not far away, and clamorously protesting at our intrusion; Killdeer and Wilson Phalaropes hovered about us along the shores. Such is the home of the Canvasback, an ornithological paradise, a rich field indeed to the naturalist, fairly teeming with bird life. Our time was well occupied during our visit to this interesting locality, and the days were only too short and too few to study the many interesting phases of bird life before us, but we devoted considerable time to the Canvasback, and, after much tiresome wading, succeeded in finding three more nests in this slough.

The first of these was found on June 8, while wading through a

thick patch of very tall flags, higher than our heads; we flushed the female from the nest and had a good look at her head as she flew out across a little open space. The nest was well concealed among the flags, but not far from the edge. It was well built of dead flags and reeds, in water not quite knee deep, and was sparingly lined with gray down. This nest contained eleven eggs, seven of the Canvasback and four of the Redhead, which were collected on June 13 and found to be just on the point of hatching. A photograph of this nest is shown herewith (Pl. IV, Fig. 1).

Another nest, found on June 8, was located in a small, isolated clump of reeds, surrounded by water over knee deep, on the edge of a large pond-like opening in the center of the slough, as is admirably illustrated in the photograph (Pl. IV, Fig. 2), kindly loaned me by Mr. Job.

The nest was beautifully made of dead and green reeds firmly interwoven, held in place by the growing reeds about it, and sparingly lined with gray down. It was built up out of the water, which was about 10 inches deep, so that the rim was about 5 inches above the surface of the water; the external diameter was about 14 inches and the inner cavity measured 7 inches across by 4 inches deep. The nest and eggs, now in my collection, were taken on June 11, at which time incubation was only just begun; it contained eight eggs of the Canvasback and one of the Ruddy Duck. All the Canvasbacks' nests that we found contained one or more eggs of the Ruddy Duck or Redhead, but we never found the eggs of the Canvasback in the nest of any other species. The Canvasbacks are close sitters, generally flushing within ten feet of us, so that we had no difficulty in identifying them by the peculiar shape of the head; in general appearance they resemble the Redheads very closely, except that the female Canvasback is lighter colored above. The eggs can be readily distinguished by their color, which is a rich grayish olive or greenish drab of a darker shade than that usually seen in the eggs of the other species.

The gray down in the nest will also serve to distinguish it from the Redhead's nest, which is generally more profusely lined with white down. In shape they are between ovate and elliptical ovate; the measurements of fifteen eggs show the following figures: length, 2.57 to 2.36; breadth 1.80 to 1.68; average, 2.48 by 1.75.



FIG. 1. NEST AND EGGS OF CANVASBACK.



FIG. 2. NEST AND EGGS OF CANVASBACK.



THE WHITE-WINGED CROSSBILL IN CAPTIVITY.

BY JAMES HAYNES HILL.

THE ornithologists of Connecticut will long remember the winter of 1899-1900, that brought to them the rare avian visitors from the North, the Red Crossbills and, rarer still, the White-winged Crossbills (*Loxia leucoptera*).

While many of the Red Crossbills extended their wanderings as far south as Washington, the White-wings were content to abide in the old Nutmeg State, and were frequently reported, feeding and otherwise, in company with the Red Crossbills, staying as late as February 27, according to Mr. H. W. Beers's field notes taken at Bridgeport (and to whom I am greatly indebted for the use of the fine series of Crossbills loaned me for comparison and examination), and later still, to March 1, at which date the captives, the subject of my sketch, were taken.

It was a few days after their capture that a lady friend, Mrs. Albert Beebe, of New London, Conn., sent word that she had a pair of strange, red colored, wild birds, with criss-cross bills and white patches on the wings. They were indeed the *rara avis*, the White-winged Crossbill and in perfect plumage — male and female birds.

Upon inquiry I learned that several had been easily enticed into a bird cage, baited with bird seed, this pair selected, and the others liberated. She also said at least fifteen or twenty birds (some without the white-wing patches, evidently the Red Crossbills), were often seen, during the winter, feeding on the spruce and Scotch larch cones in the groves, growing in the vicinity, that they had become quite tame, but were not seen after March 1.

The captives were quite tame, in fact tamer than some of her pet canaries, and they were daily allowed their liberty and would fly about the room, the male at times singing his queer little song. They are now very fond of their mistress, who has taken great pains to make their captivity as light as possible.

They bathe, drink, and are fed on the same food as the canaries, and take kindly to the little dainties provided — chickweed and bits of fruit or vegetables, and I write with truth that "Mi-lord"

Crossbill is always ungallant and "wants the first serving and the second joint."

They can pick up bird seed as deftly as any canary, though if the seed is on the bottom of the cage, they turn their heads a little on one side, seemingly to give their bills a better chance, but if the seed cup is full they have no trouble and always get their full share, being quicker than the other birds in their movements. But it is when a handful of larch or pine cones are given them that the crossed mandibles come into play; if the cones are small they fly to their perches with them, and holding them under their feet deftly extract the seeds. Should the cones be too large, they will roll them over and over until every seed is extracted, cheeping the while; if the cones are left on the branch they will hang head downward, if need be, in order that they may the more easily get at the seeds, of which they are very fond.

I was particularly interested in noting closely the moulting of the birds—especially the male—to again verify, if possible, the observations of Mr. Ora W. Knight of Bangor, Maine, who has so minutely described the moult of the Pine Grosbeak in captivity, in 'The Auk' (Vol. XIII, p. 21-24), viz.: "the red plumage changing to orange yellow—at the first moult."

Observations on the Crossbills show that in the last week of August the male ceases singing, and by the middle of September he has lost most of his large flight feathers, which are replaced by the first week of November; then the smaller body feathers are gradually replaced by orange hued feathers, slightly marked with dusky on the head and body, the rump being bright canary instead of the rich, rosy red hues that adorn them in their wild state; thus showing that not only the Pine Grosbeak but the White-winged Crossbill also loses the characteristic bright colors in the first moult in captivity, rose turning to orange yellow. The bills and feet are also light colored, viz.: the olive green in the female is less pronounced. By December the moult is complete, but the male bird does not find voice till January to sing his low, sweet song, so much resembling the Goldfinch's, and with which our pet Crossbill ushers in the day and repeats at intervals.

These birds at this writing (Nov. 11, 1901) are in perfect health, and the only annoyance is that the bill and feet grow so hooked

that they have to be trimmed to avoid accidental hanging while climbing the wires of their cage, like diminutive parrots.

The mysteries of nest building, housekeeping and the cares of nidification, are mysteries still. In the spring of 1900 the birds showed no signs of mating, and it was ascribed to their new surroundings. But during the last week of February, 1901, the female wished to go to housekeeping and materials were given them, fine twigs, fine birch bark and a little *Usnea* moss. But the male bird treated his mate with disdain, quarreling with her and driving her from perch to perch. Whether he resented the matchmaking because it was 'Hobson's choice,' or remembered the soft, sweet voice of the former partner of his joys and sorrows, the only "Mrs. *Leucoptera*" whom he had sworn to love and cherish till death part, and was loyal, I know not. Perhaps it was in grief, a memory of the blissful days in that far off northern home, among "The murmuring pines and the hemlocks, bearded with moss." Perhaps his tale of love was ended, "in Acadie, home of the happy."

SUMMER BIRDS OF THE GREAT DISMAL SWAMP.

BY JOHN W. DANIEL, JR.

DURING the middle of June, 1897, the writer, in company with Mr. William Palmer and Mr. Paul Bartsch, spent a week collecting birds in the Lake Drummond region of the Great Dismal Swamp. As is well known, this great morass occupies a billowy plain, some forty miles long by twenty-five miles across, extending from Suffolk, Va., to Albemarle Sound, N. C. Its entire western boundary is determined by a sharply defined escarpment, formed by the sea when the continent was about twenty-eight feet below its present level.

Its eastern boundary is marked by a series of low elevations, dune-like in nature, extending from Norfolk, Va., to Elizabeth City, N. C. The character of the swamp land is continuously undulating, the elevations rising and falling at slight intervals.

They are not, however, great and average only a few feet. The trees are principally cypress (*Taxodium*), black gum, beech and juniper, and there is a luxuriant growth of ferns and aquatic plants. Cane grows in profusion. The swamp comes within the Austro-riparian sub-province and contains several tropical genera of the smaller mammals and many semi-tropical plants. As regards birds, it is not especially rich with respect to species, although there is an abundance of individuals of certain forms.

Lake Drummond, in the northeastern part, is the only body of water of any size within the limits of the swamp. It is a beautiful sheet of water, of an oval contour, six miles long and three miles wide. During our visit, the country immediately adjacent to the lake was fairly well worked over, most of our collecting being done along the margins of the lake and its several small inlets.

Owing to the swampy conditions, much of the country is inaccessible, and travel on foot is possible only in the more elevated parts. Most of our travel was effected by means of small boats,—the characteristic 'dugout' of the region. In some parts, however, there are roads constructed of logs by the lumbermen, and these afford access to the country several miles back from the lake.

I append, with short annotations, a list of the birds observed during our visit.

1. *Phalacrocorax dilophus*. DOUBLE-CRESTED CORMORANT.—Accidental. A single individual taken on the lake near the southeastern shore.
2. *Ardea herodias*. GREAT BLUE HERON.—Fairly abundant on the lake shore. Several noticed on the inlets. One taken on "Jericho Ditch," near Suffolk.
3. *Ardea virescens*. GREEN HERON.—Common. Many seen on the inlets.
4. *Philohela minor*. AMERICAN WOODCOCK.—Several noticed at twilight feeding near camp at junction of 'Washington' and 'Jericho' districts.
5. *Cathartes aura*. TURKEY VULTURE.—Not very common. A few noticed.
6. *Buteo lineatus*. RED-SHOULDERED HAWK.—Quite abundant. A number observed in the timber near the southeastern shore of the lake.
7. *Syrnium nebulosum*. BARRED OWL.—Fairly abundant. Its hooting often heard at night. Frequents timber along the lake shore.
8. *Bubo virginianus*. GREAT HORNED OWL.—Not very common. Several heard hooting at night.
9. *Coccyzus americanus*. YELLOW-BILLED CUCKOO.—A few seen.

10. *Dryobates pubescens*.—DOWNY WOODPECKER.—Fairly common in woods of elevated parts.
11. *Dryobates villosus*. HAIRY WOODPECKER.—Fairly abundant in the heavy timber along the lake.
12. *Ceophloeus pileatus*. PILEATED WOODPECKER.—A few were seen in the heavy timber at the southeastern end of the lake.
13. *Melanerpes carolinus*. RED-BELLIED WOODPECKER.—Fairly abundant in the timber. Mr. Palmer took two specimens.
14. *Colaptes auratus*. FLICKER.—Not uncommon in the woods of the higher grounds.
15. *Chætura pelagica*. CHIMNEY SWIFT.—Quite abundant. We had the good fortune to observe a very interesting fact regarding these birds. Along the southeastern shore, growing in the lake some distance out from the shore line, are a number of large hollow cypresses. The roots or 'knees' of these trees extend upward and outward from the surface of the water, curving inward some distance up, and in most of them, between the water and base of the tree proper, there are openings large enough for a canoe to enter. By pushing our canoe in these intervals between the roots, we were able to examine the interiors of the hollow trees. In these we found the swifts nesting in their primitive fashion, the nests being fastened to the interior walls about midway down. Mr. Bartsch secured a nest containing eggs thus situated.
16. *Myiarchus crinitus*. CRESTED FLYCATCHER.—Quite abundant in timber near the lake shore.
17. *Contopus virens*. WOOD PEWEE.—Common in woods along the shore of the lake.
18. *Empidonax virescens*. GREEN-CRESTED FLYCATCHER.—Not uncommon along the margins of the inlets, notably where the foliage forms a canopy over the water. A nest containing eggs was found on a limb overhanging an inlet.
19. *Corvus americanus*. AMERICAN CROW.—Fairly common.
20. *Pipilo erythrophthalmus*. TOWHEE.—Abundant.
21. *Cardinalis cardinalis*. CARDINAL.—A few seen.
22. *Piranga rubra*. SUMMER TANAGER.—Fairly abundant in the woods along the southeastern lake shore.
23. *Vireo olivaceus*. RED-EYED VIREO.—Fairly abundant in the thick woods along the shore of the lake.
24. *Vireo noveboracensis*. WHITE-EYED VIREO.—Fairly common among the bushes and trees along the margin of the lake.
25. *Mniotilta varia*. BLACK AND WHITE WARBLER.—Not very common. Frequents the woods of the higher ground.
26. *Protonotaria citrea*. PROTHONOTARY WARBLER.—Decidedly the most abundant bird of the swamp. Everywhere common. Its beautiful plumage and odd song add a charm to the region, it being seen and heard in all kinds of weather and at all times of the day. Several nests in cavities of decayed trees, at slight height from the ground, were examined.

27. *Helinaia swainsonii*. SWAINSON'S WARBLER. — Rare. Frequents the cane brakes and dense growth of aquatic vegetation. Mr. Palmer took one and I captured a juvenile.

28. *Helminthus vermivorus*. WORM-EATING WARBLER. — Abundant. Frequents the wooded parts along the shore of the lake.

29. *Compsothlypis americana*. PARULA WARBLER. — Quite abundant. Nests in the hanging Spanish moss (*Usnea*) with which many of the cypresses were festooned.

30. *Dendroica vigorsii*. PINE WARBLER. — Not common.

31. *Dendroica discolor*. PRAIRIE WARBLER. — Not very common. A few seen in the clearings near the lake shore at the northern end of the lake.

32. *Seiurus motacilla*. LOUISIANA WATER THRUSH. Fairly common.

33. *Geothlypis trichas*. MARYLAND YELLOW-THROAT. — Very abundant along the shore of the lake and among the aquatic plants and bushes that fringe the inlets. Noticed it as especially common along the edges of a log road at the northern end of the lake.

34. *Sylvania mitrata*. HOODED WARBLER. — Very abundant. Ranks second with *P. citrea* as the commonest species of the district. Several nests, one containing young, were examined. They were placed in the canebrake along the margins of one of the ditches.

35. *Setophaga ruticilla*. AMERICAN REDSTART. — Abundant.

36. *Galeoscoptes carolinensis*. CATBIRD. — Very abundant.

37. *Thryothorus ludovicianus*. CAROLINA WREN. — Not common. A few heard singing.

38. *Sitta carolinensis*. WHITE-BREASTED NUTHATCH. — Fairly abundant in the woods at the southeastern shore of the lake.

39. *Parus bicolor*. TUFTED TITMOUSE. — Abundant.

40. *Parus carolinensis*. CAROLINA CHICKADEE. — Abundant.

41. *Turdus mustelinus*. WOOD THRUSH. — Common. Observed in the woods at the southeastern end of the lake.

THE STATUS OF CERTAIN SUPPOSED SPECIES OF
THE GENUS *LARUS*.

BY WILLIAM H. KOBBE.

THE genus *Larus* is one of the five or six genera into which the subfamily Larinæ is divided. This subfamily, together with the subfamily Sterninæ (which we may almost call artificial divisions) constitute the family Laridæ, or the Gulls and Terns, of which the Larinæ are the Gulls and the Sterninæ the Terns. This is by far the largest of the three families constituting the order Longipennes or long-winged swimmers. The genus *Larus* contains about twenty-one American species, which show a great variability in size and coloration of certain parts, so connected, however, by intermediate forms that systematists are unable to base generic distinctions upon these differences. So the many species still comprise one genus, in which the specific value of the birds and their complicated changes of plumage demand much further study.

In speaking of Gulls it may be well to recall the words of Dr. Coues: "Several circumstances conspire to render the study of these birds difficult. With some exceptions, they are almost identical in form; while in size they show an unbroken series. Individual variability in size is high; northerly birds are usually appreciably larger than those of the same species hatched further south; the ♂ exceeds the ♀ a little (usually); very old birds are likely to be larger, with especially stouter bill, than young or middle-aged ones. There is, besides, a certain plasticity of organization, or ready susceptibility to modifying influences, so marked that the individuals hatched at a particular spot may be appreciably different in some slight points from others reared but a few miles away. One pattern of coloration runs through nearly all the species; they are *white*, with a darker mantle (*stragulum*), and in most cases with black crossing the primaries near the end, the tips of the quills white. The shade of the mantle is very variable in the same species, according to climate, action of the sun, friction, and other causes; the pattern of the black on the quills is still more so, since it is *continually* changing with age, at least until a final stage is reached. Incredible as it may appear,

species and even genera have been based upon such shadowy characters. One group of species has the head enveloped in a dark hood in the breeding season, the under parts tinted with peach-blossom hue. The sexes are always alike; the moult appears to be twice a year, so that a winter plumage more or less different from that of summer results; while the young are never like the old. The change is slow, generally requiring 2-3 years; in the interim, birds are found in every stage. They are always *darker* than the old, often quite dusky; usually with black or flesh-colored bill; and if with black on the primaries when adult, the young usually have these quills all black. There being no peculiar extra-limital species, those of our country give a perfect idea of the whole group. Some 75 species are current; there are certainly not over 50 good ones."¹

From a large number of birds freshly killed and a series of skins, I have come to the conclusion that specific distinction does not exist between *Larus argentatus* (Brünn.) and *Larus vegæ* (Palmén). In attempting to prove this we must first clearly separate the American bird, *Larus vegæ* (Palmén), and the European *Larus cachinnans* (Pall.), which American ornithologists seem unable to do satisfactorily.

Dr. Coues, in describing *Larus vegæ* under the name of *cachinnans*, says: "Size, proportions of parts, pattern of primaries, etc., as in a common Herring Gull. Feet yellow (not flesh-color); ring around eye in the breeding season orange-red (not yellow). Mantle *dark bluish* and *much* darker than that of *argentatus*, yet not slate-colored as in *occidentalis*."²

Mr. Ridgway in his 'Manual' describes *Larus vegæ* as follows: "Mantle plumbeous-gray, or very deep pearl-gray; eyelids (in life) orange-red, and feet yellow."

These descriptions suit the European bird *Larus cachinnans*, but all American publications which I have examined describe *Larus vegæ* as having yellow feet, which according to the original description it has not. Dr. L. Stejneger noted this point in referring to the original description of *Larus vegæ* by Professor Palmén. In 'The Auk,' Vol. V, page 310, he says: "On page 370

¹ Key to N. Am. Birds, pp. 740, 741.

² *Op. cit.*, p. 744.

Prof. Palmén describes a new subspecies of the Herring Gull as *Larus argentatus* var. *vegæ*, 'characterized by a particularly dark gull-gray mantle and flesh-colored legs,' from the countries bordering on Bering Sea and adjacent waters. There is no doubt in my mind that this is the bird which North American ornithologists (including A. O. U. Check-List) call *Larus cachinnans* 'Pallas,' and I have always had a suspicion that the color of the feet of this bird as given in North American publications was erroneous, it being in most cases stated to be yellow, and my suspicion has been confirmed by the fact that Mr. P. L. Jouy in his MS. catalogue gives the color of the feet of two specimens from Japan (Jouy, Nos. 1030, 1031) otherwise indistinguishable from *L. cachinnans* Auct. Amer. as 'very pale flesh-color.' The Mediterranean bird, on the other hand, is known to have yellow feet, and as Pallas describes his *L. cachinnans* as having 'pedes pallide flavescentes' (Zoogr. Ross. As., II, p. 319), with the principal habitat 'Mare Caspium,' while he does not mention it as occurring in the Pacific, it seems as if Palmén were right in giving the form from the North Pacific a new name. I am not prepared, however, to accept as yet a trinomial appellation, as the true status and relationship of the present Gull are not well established, and propose to recognize it as *Larus vegæ* (Palmén)."

My own observations on freshly killed birds have always shown them to possess flesh-colored and not yellow legs. *Larus cachinnans* of Europe has yellow feet, as is seen not only in the original description, but in 'Notes on Avifauna of Italy' by Henry H. Giglioli, which appeared in 'The Ibis' for April, 1881, p. 219, where he says: "The adults in all seasons have the head and neck pure white without any trace of brown specks, and legs and feet of a bright yellow."

From the foregoing facts we must conclude that *Larus vegæ* has flesh-colored feet and *Larus cachinnans* yellow feet, which characters separate them at once.

The British Museum Catalogue gives the following descriptions of the two birds. In speaking of *Larus cachinnans* on page 268 of Vol. XXV, it says: "Adult in breeding plumage very similar to the preceding, from which, in fact, it differs only in the following particulars:—The ring round the eye is bright orange-red, the gape

is the same colour, the yellow and red of the bill are much brighter, the tarsi and toes are brilliant yellow; the mantle is, as a rule, decidedly darker, while the black and gray on the primaries show a deeper tone, and the middle toe with the nail is usually rather shorter than the tarsus.

"The *female* is smaller than the male as a rule.

"*Adult in winter.* As in summer; the usual greyish striations being absent, or so faint as to be practically invisible.

"*Immature, Young, and Nestling.* As in *L. argentatus*. The tarsi and toes are at first flesh-coloured, but they soon begin to show a yellowish tint in the live bird, though this is of course, lost in preserved specimens.

"*Hab.* Southern Europe, from the Gulf of Gascony downwards; Madeira (probably the Azores), the Canaries, and the opposite coast of Africa; the entire basin of the Mediterranean, the Black sea, the Aral, the Caspian and eastward to Lake Baikal (breeding). In winter to India, from the bay of Bengal to Bombay; the Mekran coast; Persia; the Red sea; and down the west side of Africa, apparently to Angola."

The description of *Larus vegæ* which is found in Vol. XXV, pp. 270-271, and which in my opinion gives the bird one of its true characters is as follows: "*Adult male in breeding-plumage.* Differs from *L. cachinnans* in the colour of its tarsi and toes, which are pale flesh-colour, and the mantle is, perhaps, of a darker and bluer grey.

"*Obs.* It will be seen that *L. argentatus*, *L. cachinnans* and *L. vegæ* are very closely allied. There appears however, to be a somewhat important break of continuity; *L. argentatus* stopping at the White Sea, and no large Gull with black-patterned primaries being found to the eastward, till the Taimyr peninsula is reached."

From my own observations and the foregoing descriptions we may clearly separate *Larus cachinnans* and *Larus vegæ* by the difference in color of the feet; the former having bright yellow feet and the latter flesh-colored. But in doing this we invalidate one of the supposed specific distinctions existing between *Larus vegæ* and *Larus argentatus*, since both are now seen to possess flesh-colored legs. There now remain but two characters said to separate these birds; the color of the mantle and the color of the orbital ring.

The color of the mantle is said to be of a lighter shade in *Larus argentatus* than in *Larus vegæ*. The orbital ring of *Larus argentatus* is said to be yellow, while that of *Larus vegæ* is orange-red. Are these not very indefinite and variable characters on which to base a separation of species in a genus which is known to possess individuals easily influenced by external conditions giving rise to many shades of color in the same bird?

In the series of the California Academy of Sciences the mantles of these birds show every intermediate shade from the darkest to the lightest. My birds likewise have many intermediate shades which cannot be called either light *argentatus* or dark *vegæ*. We cannot therefore separate the two by so variable a character as the shade assumed by the mantle, and the only remaining difference exists in the color of the orbital rings.

From the colors noted on freshly killed adult birds collected by me during the months of December, January, March, and April, 1900-01, I find that the color of the orbital ring is not to be relied upon, as it is seldom the same, being generally black or flesh-colored. This series of birds was collected on San Francisco Bay, from their arrival to their departure. During March and April, just before their departure, the birds assumed their breeding dress, but this circumstance does not enable one to separate the two, as the color of the orbital rings does not change. The feet also remain flesh-colored.

Of the many birds shot (the colors being noted) I preserved fourteen specimens and these, together with the series of the California Academy of Sciences of about twenty adult birds, formed an excellent basis for the study of variability in coloration and the constancy of ascribed characters.

The following table gives the colors as noted in the freshly killed birds now in my collection.

Locality.	Date and Sex.	Color of Feet.	Color of Orbital Ring.
San Francisco Bay	Dec. 7, 1900 ♂	Flesh color	Flesh-color.
" " "	Dec. 9, 1900 ♀	"	Dusky orange-red.
" " "	" " " ♀	"	Blackish
" " "	Dec. 18, 1900 ♀	"	Reddish flesh-color.
" " "	Dec. 27, 1900 ♀	"	Not taken.
" " "	" " " ♀	"	Blackish.
" " "	" " " ♀	"	Flesh-color.
" " "	" " " ♀	"	"
" " "	Jan. 18, 1901 ♀	"	Very pale and indefinite color.
" " "	" " " ♀	"	Reddish flesh-color.
" " "	Jan. 19, 1901 ♀	"	Dusky flesh-color.
" " "	Feb. 2, 1901 ♀	"	Flesh-color.
" " "	Feb. 8, 1901 ♀	"	"
" " "	" " " ♀	"	"
" " "	April 8, 1901	"	Dusky flesh-color.
" " "	April 17, 1901	"	Flesh-color.

In the light of these facts it appears that *Larus vegæ* is indistinguishable from *Larus argentatus*, and as the latter has the priority I propose that *Larus vegæ* be dropped from our nomenclature.

BIRDS OF THE NORTHEASTERN COAST OF LABRADOR.

BROWN-HARVARD EXPEDITION OF 1900, UNDER THE LEADERSHIP
OF PROFESSOR DELABARRE.

BY HENRY B. BIGELOW.

THE OBSERVATIONS noted in the following list were made on the Brown-Harvard Labrador expedition of 1900. The area embraced was that portion of the eastern coast from Belle Isle, Lat. 51° 53', to Nachvak Fiord, Lat. 59°. The birds noted are strictly those of the immediate coast region, for we did not penetrate much farther into the interior than the heads of the bays.

The coast fauna combines both arctic and sub-arctic forms, comprising such arctic species as the polar bear, arctic wolf, white fox, Hudson Bay lemming, barren ground caribou, and at the same localities the black bear and the red fox. Among the birds the same combination can be noted. It will be seen at once that the list does not contain many species given by Turner as occurring at Ungava. This is explained by the fact that the eastern coast is absolutely cut off from the interior by the range of mountains which follows the shore. This range, which attains an extreme height of perhaps six or seven thousand feet, rises abruptly from the water's edge, so that the coast region proper is restricted to a narrow strip, merging at once into the barren hillsides and boulder slopes of the uplands. This ridge is an insurmountable barrier to the wanderings of most of the small birds. The hilltops were inhabited only by a few Titlarks, Snow Buntings, Longspurs, and Rough-legged Hawks.

The vegetation of the coast region, especially of the islands, is very scanty. The timber line, for the immediate seacoast, is near Hamilton Inlet. About the heads of the bays we found timber as far north as Nain, beyond which the trees dwindled to scrub spruces, and dwarf willows and birches along the lower water courses. Most of the barren country is covered with caribou moss, with blueberries and Labrador tea growing profusely in the boggy places.

The climate is cold, the mean temperature for the year being about 29° Fahrenheit. During the summer it ranged from 29° to about 55°. Twice we got temperature of 70°, but this was only in very sheltered spots, and for an hour or two at a time.

1. *Urinator imber*. LOON. — Fairly common along the coast, particularly in the deeper fiords and on the larger lakes. Breeding locally. The skins from the necks of adult loons are much used by the Eskimo for ornamental work.

2. *Urinator lumme*. RED-THROATED LOON; WABBY. — Nests in small ponds inland. Appears on the coast after the young are able to fly, when it is rather common, particularly in September. One which I examined had the stomach filled with caplin.

3. *Fratercula arctica*. PUFFIN; SEA PARROT. Abundant all along the coast. Still breeds in comparative abundance on many of the outlying islands. The young were fully fledged and in the water by the 25th of

August. Though highly esteemed by the natives, we could not consider them a delicacy. Drawings which I made of bills of young just fledged show a great resemblance to those of Brünnich's Murre and the common Murre.

4. *Cephus grylle*. BLACK GUILLEMOT; PIGEON.—The Black Guillemots were, with one exception, the most numerous of all the sea fowl. They still breed in great abundance on almost all the suitable islands, and are killed in great numbers for food. I was unable to discover any trace whatever of Mandt's Guillemot, although Turner reports it "abundant" on the east coast.

5. *Uria tfoile*. MURRE.—We found the Murres fairly common to Hamilton Inlet, north of which we saw very few. A large colony was reported to us, however, at Eclipse Harbor. Probably no bird has suffered more from the depredations of the eggers than this, which is in merely a remnant of its former numbers.

6. *Uria lomvia*. BRÜNNICH'S MURRE.—Of about the same occurrence as the Murre,—perhaps even less common.

7. *Alca torda*. RAZOR-BILLED AUK; TINKER.—Although subject to the same persecution as the Murres, the Razor-billed Auk seems to have stood it better, and is still abundant all along the coast. We found them in July in considerable numbers in the lanes in the floe ice. They breed in company with the Murres.

8. *Alle alle*. DOVEKIE; BULL BIRD.—Reported as very common in winter. I observed only one, off Cape Harrison, on September 18.

9. *Stercorarius pomarinus*. POMARINE JAEGER.—Rather rare; much less common than the other jaegers.

10. *Stercorarius parasiticus*. PARASITIC JAEGER.

11. *Stercorarius longicaudus*. LONG-TAILED JAEGER.—These two jaegers were rather common, usually two or three following each flock of Kittiwakes. They went together indiscriminately, and their habits seemed to be identical.

12. *Rissa tridactyla*. KITTIWAKE.—By far the most abundant of all the sea fowl. We met them continually in large flocks. After the young left the nest, they assembled together in enormous numbers to pursue the caplin, and, in company with the other gulls, made a deafening uproar. We found the young ones very good eating.

13. *Larus glaucus*. BURGOMASTER.—We found Burgomasters common north of Cape Harrison, though they seldom gathered in large flocks. At Port Manvers they were particularly abundant. We could find no evidence of their nesting, though young birds appeared in great numbers about the end of August.

14. *Larus marinus*. BLACK-BACKED GULL.—Common; rather less so than the Burgomasters. Breeding commonly. Two young, kept in captivity, had enormous appetites and became very tame. They were ready to fly by August 15.

15. *Larus argentatus smithsonianus*. HERRING GULL.—Common all along the coast.

16. *Larus delawarensis*. RING-BILLED GULL.—I took one young specimen at Port Manvers, Sept. 6.

17. *Larus philadelphia*. BONAPARTE'S GULL.—Common south of Hamilton Inlet in September, particularly about the Straits of Belle Isle. There is no indication of its breeding anywhere on the coast.

18. *Sterna paradisæa*. ARCTIC TERN.—We saw a few about Belle Isle in July and again in September.

19. *Fulmarus glacialis*. FULMAR; NODDY.—We found the Noddies rather common offshore among the flocks of shearwaters. Almost all were in the light phase. Many that we saw were so gorged that they could not rise from the water.

20. *Puffinus major*. GREATER SHEARWATER; HAGDON.—Common in large flocks offshore. We occasionally ran into great flocks of these birds a good way offshore. They were very tame and would hardly take wing before the schooner ran them down.

21. *Puffinus stricklandi*. SOOTY SHEARWATER.—Common, among the Greater Shearwaters. The shearwaters were the only sea fowl which proved to be totally inedible.

22. *Oceanodroma leucorhoa*. LEACH'S PETREL.—Very common locally south of Hamilton Inlet. North of that they were rare. We visited several islets where the turf was riddled with their holes, and the air reeked with their sharp musky odor.

23. *Sula bassana*. GANNET.—We saw three or four near Belle Isle on the way north, but no more anywhere along the coast.

24. *Phalacrocorax carbo*.—CORMORANT; SHAG.

25. *Phalacrocorax dilophus*. DOUBLE-CRESTED CORMORANT.—We saw a few near Belle Isle, but no others. They seem to breed altogether along the southern coast.

26. *Merganser serrator*. RED-BREASTED MERGANSER.—Locally common; very widely distributed.

27. *Anas obscura*. BLACK DUCK.—Rather rare. We saw very few Black Ducks, and of those few most were south of Hamilton Inlet. Apparently restricted to the inland ponds.

28. *Aythya marila*. GREATER SCAUP.—I received one from Dr. Grenfell. It was shot near Nain in October, 1899. So far as I can find out this is the only record from the east coast.

29. *Glaucionetta clangula americana*. GOLDEN-EYE.—Reported common in late autumn. I saw only one specimen, near Port Manvers, August 11.

30. *Somateria borealis*. NORTHERN EIDER.—Abundant north of Hamilton Inlet. The eiders were usually in small flocks, males and females separate. They breed commonly near most of the fiords.

31. *Somateria dresseri*. AMERICAN EIDER.—Abundant south of Hamilton Inlet, where it takes the place occupied by *S. borealis* in the north. An important article of food for the settlers. The Eskimo make tobacco pouches from the skins of the young ducks.

32. *Oidemia americana*. BLACK SCOTER.—Common; less so than the other scoters.

33. *Oidemia deglandi*. — VELVET SCOTER.

34. *Oidemia perspicillata*. SURF SCOTER.—Abundant, in about equal numbers, and often flocking together. They came down to the coast late in August, and were soon very numerous in the fiords. Known as 'Black Ducks.'

35. *Anser albifrons gambelli*. AMERICAN WHITE-FRONTED GOOSE.—I received one specimen, an adult male, from Dr. Heltasche. It was shot near Hopedale, May, 1900. So far as I can learn, it is the only record.

36. *Branta canadensis*. CANADA GOOSE.—Abundant in spring. Common in fall after August 1. Breeds mostly in the interior.

37. *Branta bernicla*. BRANT.—Reported as very rare. One specimen from Dr. Grenfell, Nain, October, 1899.

38. *Botaurus lentiginosus*. AMERICAN BITTERN; MARSH HEN.—I saw two or three at Cape St. Francis, on the way south. This was just north of Belle Isle.

39. *Crymophilus fulcarius*. RED PHALAROPE.—Rather rare. Seen several times in small flocks offshore.

40. *Phalaropus lobatus*. NORTHERN PHALAROPE.—Common. Breeding in almost all the suitable marshes; occasionally very abundant offshore.

41. *Gallinago delicata*. WILSON'S SNIPE.—Three or four near Cape St. Francis.

42. *Tringa maculata*. PECTORAL SANDPIPER.—Very common all along the coast after the middle of August. Particularly abundant about the Hopedale Mission, where they were almost as tame as English Sparrows.

43. *Tringa minutilla*. LEAST SANDPIPER. Abundant. Breeds commonly all along the coast.

44. *Tringa alpina pacifica*. RED-BACKED SANDPIPER.—A few at Port Manvers in early September.

45. *Tringa fuscicollis*. WHITE-RUMPED SANDPIPER.—Very abundant at Port Manvers after August 10. On the way south we met them wherever there were beaches.

46. *Ereunetes pusillus*. SEMIPALMATED SANDPIPER.—Common, breeding locally. I took the downy young at Seal Island, and as I cannot find that it has been described, I shall insert a brief description here:

Downy young, a few feathers just appearing. Above dark gray, mixed with rufous, giving a peculiar spotted appearance. A dark line over the eye and along the side of the head. Top of the head with feathers just beginning to show. These feathers slaty tipped with white, giving a hoary appearance. Below downy, the belly white, the breast and fore-neck washed with rufous, entirely unstreaked. Legs and feet black, without any sign of webs whatever.

47. *Calidris arenaria*. SANDERLING.—Rather rare; apparently not breeding.

48. *Totanus melanoleucus*. YELLOW-LEGS. — Uncommon; a few late in September at Port Manvers.

49. *Actitis macularia*. SPOTTED SANDPIPER. — Very abundant; breeds everywhere along the coast.

50. *Numenius borealis*. ESKIMO CURLEW. — The Eskimo Curlew are hardly a remnant of their former numbers. I made careful inquiries among the settlers, and obtained the following rather interesting information: (1) The curlew remained in all their former numbers, in spite of the persecution to which they were subjected, until eight years ago. (2) They then appeared no more. I heard of only about a dozen, which were seen on the coast this fall. Of these I saw five.

52. *Charadrius dominicus*. GOLDEN PLOVER. — Not common. I saw several flocks after August 22, mostly young birds, probably mere stragglers.

53. *Ægialitis semipalmata*. SEMIPALMATED PLOVER. — Very common; almost as much so as the Spotted Sandpipers. Nesting all along the coast.

54. *Lagopus albus*. WILLOW PTARMIGAN. — Rather common north to Nain, beyond which point we did not see it. In some places abundant.

55. *Lagopus rupestris*. ROCK PTARMIGAN. — Common from Hamilton Inlet northward. Beyond Okak the Rock Ptarmigan probably belong to the race *reinhardtii*. We found the ptarmigan very acceptable additions to the larder.

56. *Archibuteo lagopus sancti-johannis*. ROUGH-LEGGED HAWK. — Very common almost everywhere, nesting on cliffs some distance from the sea. Different pairs of hawks seemed to hold definite tracts of country, from which they drove all intruders.

57. *Falco rusticolus obsoletus*. LABRADOR GYRFALCON. — Rare. One at Port Manvers, September 4.

58. *Falco peregrinus anatum*. DUCK HAWK. — Fairly common, especially wherever the sandpipers were flocking.

59. *Asio accipitrinus*. SHORT-EARED OWL. — Rather common at Port Manvers and Nachvak, in September.

60. *Otocoris alpestris*. HORNED LARK. — Abundant everywhere on the bleakest and most exposed hillsides. So far as I could determine, all the Horned Larks observed belonged to this race.

61. *Perisoreus canadensis nigricapillus*. LABRADOR JAY. — Locally common, even abundant as far north as Port Manvers.

62. *Corvus corax principalis*. RAVEN. — Locally common, especially so at Port Manvers.

63. *Pinicola enucleator*. PINE GROSBEEK. — Common in the spruce woods north of Aillik, beyond which the spruces dwindled into low bushes.

64. *Acanthis linaria*. COMMON REDPOLL. — Very common everywhere. Apparently all the Redpolls belong to this race.

65. *Spinus pinus*. PINE SISKIN. — Rather rare. Occasionally I noticed a few with the Redpolls before we passed the tree line.

66. *Plectrophenax nivalis*. SNOW BUNTING. — Snow Buntings appeared at Port Manvers about the 10th of August, after which they were abundant.

67. *Calcarius lapponicus*. LAPLAND LONGSPUR. — Common after August 3. Breed about Nachvak and northward to Hudson Straits. South of Nachvak they occur only as migrants.

68. *Passerculus sandwichensis labradorius*. LABRADOR SAVANNA SPARROW. — The new subspecies of *Passerculus sandwichensis* recently separated by R. H. Howe, Jr., seems to rest on good foundation, but ranges much farther north than he supposed (Lance and Loup), for I found it fairly common at Port Manvers (Lat. 57°) during last half of August and the first week of September.

69. *Zonotrichia leucophrys*. WHITE-CROWNED SPARROW. — The most abundant land bird, common wherever there was any spruce scrub.

70. *Spizella monticola*. TREE SPARROW. — Rather uncommon, but widely distributed. I observed a good many at Port Manvers.

71. *Junco hyemalis*. JUNCO. — Locally common as far as the tree line, particularly at Aillik.

72. *Melospiza lincolni*. LINCOLN'S SPARROW. — Common. A characteristic bird of the wooded parts of the coast, as far north as Hamilton Inlet.

73. *Passerella iliaca*. FOX SPARROW. — Common along the southern part of the coast. We found a few as far north as Aillik.

74. *Dendroica coronata*. MYRTLE WARBLER. — Rather common on the southern half of the coast.

75. *Dendroica striata*. BLACK-POLL WARBLER. — A very abundant and characteristic bird, as far north as the limit of timber near Cape Aillik.

76. *Seiurus noveboracensis*. WATER THRUSH. — Locally common as far north as Aillik.

77. *Sylvania pusilla*. WILSON'S WARBLER.

78. *Sylvania canadensis*. CANADIAN WARBLER. — These two warblers were noticed only in the extreme south, so that they have very little claim to places in this list.

79. *Anthus pensilvanicus*. TITLARK. — One of the most abundant birds. Characteristic, with the Horned Lark, of the most barren and wind-swept hilltops. Breeds very commonly.

80. *Parus atricapillus*. CHICKADEE. — Locally common in timbered regions.

81. *Regulus satrapa*. GOLDEN-CROWNED KINGLET. — Fairly common in patches of spruce timber, as far as Aillik.

82, 83. *Turdus ustulatus swainsoni*. OLIVE-BACKED THRUSH; *Turdus aliciae*. GRAY-CHEEKED THRUSH. — One or the other of these thrushes was common as far north as Aillik. I supposed they were all the Olive-backed, but one which I took at Battle Harbor proved to be a Gray-cheeked which leaves me somewhat in doubt as to the identity of the others.

84. *Merula migratoria*. ROBIN.—Locally common. Several large flocks appeared at Port Manvers on September 6, apparently from the North.

85. *Saxicola œnanthe*. WHEATEAR.—Nests near Nachvak, for the Hudson Bay Company factor there had nests which he had taken. I did not observe the bird.

REPORT OF THE COMMITTEE ON THE PROTECTION OF NORTH AMERICAN BIRDS.

DURING the past year bird protective work in America has been more effectively systematized than ever before and the results have been correspondingly definite and far-reaching. The vigorous and efficient enforcement of the Lacey Act, by the Division of the Biological Survey of the U. S. Department of Agriculture, under the personal direction of Dr. T. S. Palmer, has gone far toward suppressing the trade in sea birds for millinery purposes and has spread consternation among illicit game dealers throughout the country. The firm backing thus furnished by the Federal government has spurred on the State Game Protective Societies to renewed efforts and stimulated game protection all along the line. In this connection we cannot too highly praise the several 'Bulletins' prepared by Dr. Palmer and Mr. H. W. Olds, and issued by the U. S. Dept. of Agriculture, giving concise abstracts of the game and bird laws of the several States.

The operations under the Thayer Fund for the protection of Gulls and Terns have been, as heretofore, under the able direction of Mr. William Dutcher. The protection afforded the sea birds of our Atlantic Coast last year has been continued and extended with gratifying results.

In addition Mr. Dutcher and Dr. Palmer have personally appeared before the legislatures of most of the States from Maine to Florida in the interests of better State bird laws, and in every instance their efforts were crowned with success.

The work of the Audubon Societies has continued on the same lines as heretofore and has been reported upon from time to time

in 'Bird-Lore,' the official organ of the Societies. Several new societies have been organized during the year, and at the last session of the A. O. U. at Cambridge, the first step was taken towards an affiliation of the State societies. Delegates from nine State organizations took part in the conference, and it was decided to establish the Conference as a regular feature of the A. O. U. Congress.

The work of the Audubon Societies I find is not fully appreciated by the public at large and many persons noting the continuance of the feather fashion hastily conclude that they have failed in their object. This however is not so. Like most other reforms the suppression of the feather fashion cannot be accomplished all at once; it is a gradual work, and the portion already accomplished must not be lost sight of. It is the widespread popular interest in birds which has rendered possible the passage of the many improved bird laws and the establishment and maintenance of the Thayer Fund, and for this popular interest the Audubon Societies are directly responsible.

We should therefore use every effort to encourage those who are active in conducting the work of these societies and give them every possible assistance, for only by keeping alive and spreading the present interest can we permanently stamp out the feather trade.

In this connection your chairman would suggest to the Audubon Societies the importance of discouraging the use of any feathers except those of the ostrich and domestic rooster, which can be easily identified.

All secretaries have doubtless been assailed by numerous inquiries whether this or that feather is admissible, and too many members are content with the assurance of the milliners that various quills, sprays and tufts of feathers now so largely replacing entire birds are manufactured from the plumage of domestic fowls.

Your chairman recently examined a large series of sample feathers from one of the leading milliners in Philadelphia and found that fully nine tenths of the material was *not* the plumage of domestic fowls. Part of the dyed, trimmed and bespangled feathers defied more accurate determination, but the plumage of the Indian Vulture, Nicobar Pigeon, Great Bustard, Baikal Teal, Indian

Pheasant, Impeyan Pheasant, and Gull, were positively identified. Though not American birds, to be sure, all of them are wild birds.

Turning to the immediate work of your Committee for the past year, it should, in the first place, be stated that for the purpose of making our body still more representative and effective, ten additional members have been appointed, namely, Mr. A. H. Thayer, New York; J. Merton Swain, Maine; James H. Hill, Connecticut; F. C. Kirkwood, Maryland; M. J. Elrod, Montana; George E. Beyer, Louisiana; R. W. Williams, Jr., Florida; Frank Bond, Wyoming; W. L. Baily, Pennsylvania; W. O. Emerson, California.

As already explained, the most important work of the year has been accomplished by the Lacey Act, the Thayer Fund, and the Audubon Societies, but since all of these are in whole or in part the outgrowth of this Committee and as our members are all active in one or other of these lines, their work naturally forms part of your Committee's report.

As most of the details of this work will be reported on by Mr. Dutcher and Dr. Palmer, it remains for your chairman to briefly summarize such other matter as is contained in the reports submitted by the members of the Committee.

The universal feeling seems to be that there is a great increase of sentiment throughout the country in favor of bird protection on the part of all classes. In every State where bird laws failed of passage, at the last legislature, redoubled efforts will be made at the next session. Newspapers are not only willing to print reports and circulars on bird protection but in many cases apply to members of the Committee for such matter. Farmers and land-owners show an increasing desire to assist in the work by posting notices and enforcing the law.

From Illinois Mr. Deane reports the failure of an effort to place Meadowlarks on the game list, and the practical suppression of the trade in American cage birds in Chicago.

From California Mr. Emerson reports the failure of the Cooper Ornithological Club's bird law after getting it through both branches of the legislature, but hopes for better success at the next session. He states that so far as he knows, no birds are now collected in California for the millinery trade, but the Italian fishermen still net small birds for the San Francisco market. As many

as 1000 are sometimes caught in one setting of the net, largely Song Sparrows and Yellow-throats.

In Arkansas Mrs. Stephenson and Mrs. Sara T. Thomas have been very active in distributing bird protection posters to the sheriffs, school superintendents, mill owners, etc., a work that cannot fail of good results. Mrs. Florence Merriam Bailey urges the same plan of action among the ranches of the southwest. She found at Carlsbad, New Mexico, great flocks of wading birds of all sorts in the irrigated fields, and to anyone in search of either plumes or game, wholesale slaughter would be an easy matter. "The indifference and ignorance," she says, "of the ranchmen in regard to birds makes them largely careless of their destruction and the question suggests itself: Should more effort be made to reach the ranchmen and farmers with bird protective literature? This might perhaps be done in the East through the granges and in the West through agricultural journals."

On the whole, the present status of our work is most encouraging, and in closing I can only urge those who are aiding us to continue their support, feeling sure that the results amply justify our efforts.

WITMER STONE,

*Chairman A. O. U. Committee on the Protection
of North American Birds.*

RESULTS OF SPECIAL PROTECTION TO GULLS AND TERNs OBTAINED THROUGH THE THAYER FUND.

Plate I.

"I will not kill or hurt any living creature needlessly, nor destroy any beautiful thing, but will strive and comfort all gentle life and guard and perfect all natural beauty on earth."—From JOHN RUSKIN's '*Declaration*.'

THE SECOND year of the special work of the Committee entrusted with the administration of the Thayer Fund has passed,

and the results obtained during that period, it is felt, are very encouraging and fully warrant continued efforts. As the work progresses, the field of operation enlarges greatly, and consequently demands a rapidly increasing expenditure of thought, time, and money by the Committee.

Before entering into the details of the work it again becomes necessary to speak in the highest terms of the part that has been assumed by Mr. Abbott H. Thayer. The fact that he has collected all of the money that has been expended speaks for itself. It is the most thankless portion of the work, and that portion of it that needs the most delicate handling, and had he not succeeded the whole plan of operation must necessarily have been abandoned. The burden of soliciting funds for the proper carrying on of protection work will soon become too great to be borne by one person.

Every year immense sums of money are given by philanthropic persons to Humane Societies, and to Societies for the Prevention of Cruelty to Animals. The American Ornithologists' Union is an incorporated society, national in its territorial scope, and capable of wisely administering any donations of funds or any legacies directed to be paid to its permanent endowment, which has already been commenced. This endowment fund is to be maintained in perpetuity and the interest alone is to be used for the protection of *North American Birds*. It is unnecessary at this time to speak of the very great economic and æsthetic value of the birds; it is a fact too patent to need further comment. An appeal is made to the generous American public to contribute to the permanent endowment fund of the American Ornithologists' Union so that the birds of the country may always have given them the protection they so much need.

Two general lines of work have been followed by the Committee, both of them of great importance, but of widely different character, which may be designated as follows: Legislative Work, and Protection by Wardens.

LEGISLATIVE WORK.

Prior to 1901 only five States had laws for the protection of non-game birds that were at all satisfactory; these were:

Indiana,	statute dated	March 5, 1891.
Vermont,	" "	Nov. 22, 1892.
Arkansas,	" "	March 15, 1897.
Illinois,	" "	April 24, 1899.
Rhode Island,	statute dated	May 4, 1900.

The laws of Indiana and Illinois are substantially the form of statute recommended by the American Ornithologists' Union, while the others follow it so closely that the non-game birds receive ample protection when the law is enforced.

In this connection it will be of interest to note that the passage of the law in the State of Arkansas was the result of the efforts of a member of the Union, Mrs. Louise McGown Stephenson, who, unaided, was able to accomplish the much needed reform. In addition to this great work, Mrs. Stephenson insists that the law shall be respected by the citizens of her State, and more than one law breaker has reason to remember that the birds of Arkansas have good laws and good friends to protect them.

In the report submitted by this Committee one year ago, the work done by the wardens employed was found to have resulted in a large increase in the sea birds breeding from Virginia northward to Maine. These wardens, however, were only employed during the breeding season, as in none of the States where they were located were there any laws to protect the birds after the breeding season was over. Inquiry later in the year disclosed the fact that the plume hunters resumed their work in the fall and winter season, notably in New York, Massachusetts, and Maine, when many hundreds of gulls and terns were killed.

Your Committee therefore decided to make a systematic and determined effort to improve the bird laws of as many States as possible, especially those along the Atlantic seaboard.

Before attempting to amend the laws of a State, it is necessary to make a thorough study of its existing statutes relating to game

and non-game birds, and also to review the legal decisions made by the courts of the State.

While the Committee always uses the A. O. U. model law as a basis, yet it is found that certain modifications have to be made; this work has always devolved upon Dr. T. S. Palmer, and to his clear and judicial insight in such matters the Union is very largely indebted for the many perfect laws that were passed during the year 1901.

A complete new law, or much needed amendments to existing laws, were enacted during the present year in eleven States, as follows:

Maine,	Feb. 15, 1901.	Delaware,	March 9, 1901.
New Hampshire,	March 25, 1901.	District of Columbia,	March 3, 1901.
Massachusetts,	March 21, 1901.	Florida,	June 4, 1901.
Connecticut,	Aug. 1, 1901.	Wisconsin,	April 9, 1901.
New York,	March 12, 1901.	Wyoming,	Feb. 14, 1901.
New Jersey,	March 20, 1901.		

In a number of instances it was necessary for either Dr. Palmer or the writer, or both, to visit the legislature where our bill was under consideration. It is, however, but a plain statement of facts to say that whenever a carefully prepared argument was presented to a legislative game committee, or to the members at large, showing the great economic value of non-game birds, and how inadequately they were then protected, that willing and attentive listeners were found, and in most cases the desired law was enacted without any delay further than that required by parliamentary practice, which always varies in different States. In every State certain modifications have to be conceded to meet the experience or preconceived ideas of its citizens; for instance, the Bobolink (*Dolichonyx oryzivorus*) of New England, which is there prized as a bird of great economic and æsthetic value, and is always protected, in the South Atlantic States, by reason of its change in habits, becomes a pest to the rice grower and is classed with the English sparrow as an outlaw.

To give the members of the Union and the generous contributors to the Thayer Fund some idea of the amount of labor required, and the number of persons directly interested in the passage of

the eleven new laws, a very brief seriatim statement is herewith submitted:

MAINE. — A member of the Maine Ornithological Society was fortunately also a member of the legislature, and he introduced a bill at the request of his Society. Dr. Palmer and the writer visited the State capital in January and addressed a joint committee of both houses in the Hall of Representatives. The President and Secretary of the Maine Ornithological Society also presented the claims of the birds, and certain wealthy and influential citizens of the State retained an attorney to appear in behalf of the bill. The plume hunting interests were represented by one person, who wisely refrained from making any statement in view of the very strong array of sentiment developed in behalf of the birds. In the evening an illustrated talk on birds was given in the Hall of Representatives, to a large and enthusiastic audience. The result of the day's work in behalf of the birds created such a decided interest that the bill passed the House in a few days, and on the following day was passed in the Senate, and on the third day received the signature of the Governor.

The Thayer Fund furnished 1600 large linen and manila warning notices giving a brief outline of the law and the penalties, which were distributed to every post office in the State by the Maine Ornithological Society; they were also liberally posted on and about all the breeding grounds on the coast.

NEW HAMPSHIRE. — In this State the introduction of the bill and its subsequent enactment into law was entirely the work of the Audubon Society, aided by a few suggestions from the Committee.

The Thayer Fund furnished 850 warning notices, which were distributed throughout the state by the Audubon Society. The Secretary of this Society is now actively engaged in seeing that the provisions of the new law are being carried out, especially along the line of preventing the sale of the plumage of all wild birds that are protected.

MASSACHUSETTS. — By the unaided work of Mr. George H. Mackay, a much needed amendment to the existing laws was carried through the legislature, to wit: that Terns and all Gulls excepting Herring Gulls (*Larus argentatus smithsonianus*) and

Great Black-backed Gulls (*Larus marinus*) are protected at all times. This amendment is certainly a great gain, but it is very unfortunate that the Herring Gull is not protected, especially in the winter months when they are so common on the coast. If the Audubon Society will aid Mr. Mackay during the next legislative session to have the law still further amended, so that protection will be given the two excepted species of gulls, it will close up the only gap in the protection of these birds in the coast-wise States from Maine to Virginia.

In the spring of the present year a detective was sent to ascertain whether illegal shooting was going on, but none was discovered; evidence, however, was obtained that a number of gulls and terns had been shipped to a dealer in New York during the close season in the latter State, and suit was brought against the New York dealer, which is still in court. If a conviction is obtained the fines will amount to over \$1500.

Later in the year our fellow member, Mr. Howe, made two special trips along the Massachusetts coast to ascertain whether the law was being observed, and he reported, after a very careful inquiry, that he could not find any persons shooting illegally.

CONNECTICUT.—In this State an entirely new and very radical game law was enacted through the united work and influence of the Audubon Society, the local branch of the League of American Sportsmen, and our fellow member and committeeman, Mr. J. H. Hill. One section of the law was devoted to the non-game birds and is practically the A. O. U. model. Immediately after the law went into effect the Audubon Society distributed large numbers of warning notices printed on linen. In this connection it is a pleasure to call attention to the very valuable aid given to the advocates of the new law by the Hon. A. B. Calkins, Chairman of the Game Committee of the House of Representatives.

NEW YORK.—The writer, immediately after the opening of the legislature, visited Albany, and by the courtesy of the Hon. Wm. M. McKinney introduced a bill to amend certain sections of the game law by substituting the words, "ducks, geese, brant and swan" for the words "web-footed wild fowl," wherever used. The bill successfully passed both houses of the legislature and received the Governor's signature. The effect of the amendment

was to transfer all of the web-footed birds, except ducks, geese, brant and swan, to the wild bird section, for which there is no open season. The amendment also removed by a special clause the grebes and bitterns to the protected class. The Thayer Fund distributed large numbers of linen warning notices in the coastwise counties of the State.

The writer, accompanied by a State game warden, visited all of the cage-bird dealers in New York City. Many of them were found with protected birds in their possession and suits were at once commenced. In every case but one the dealers paid the fines rather than defend the suit. It most effectually broke up the trade in native birds, the dealers now being content to traffic in canaries or imported wild birds. A visit was also made early in October to Wantagh, Long Island, and a taxidermist's shop was examined. Fifty-nine gulls (*Larus delawarensis* and *L. argentatus smithsonianus*) were found, some still in the flesh and others in various stages of preparation for millinery ornaments. Suit for the sum of \$1510, fines, was at once commenced by the attorney for the State.

Large numbers of the retail milliners and large department stores in New York City have been visited by the writer and a notice calling attention to the law has been served. In many instances the retail dealers returned to the wholesale dealers stock lately purchased, on the ground that it was illegal to have the same in possession for sale, and they were unwilling to take any risks of prosecution. It is believed that only a few of the smaller wholesale houses still traffic to any extent in gulls and terns, and some of these claim that the stock they are now trying to dispose of was procured before the law went into effect. If this is the case, the dealers are trying to work off upon the women of the State some material that is old and out of date. It is proper to say in this connection that there are many wholesale millinery houses in this city that will not handle, under any circumstances, the plumage of any wild North American birds, notably the members of the Wholesale Millinery Protective Association.

NEW JERSEY.—The A. O. U. model law was introduced as a bill by Senator Joseph Cross at the request of the Audubon Society. Dr. Palmer and the writer appeared before the Senate Game

Committee and made an argument in favor of the bill, with the result that a favorable report was secured. Later the bill passed both houses and became a law by the signature of the Governor. Unfortunately two days later the Governor signed a general game law which conflicted with the A. O. U. law in that it makes an open season for two months (September and October) for such an extremely valuable insectivorous bird as the Highholder (*Colaptes auratus luteus*). The State of New Jersey now has two laws in force, in one of which the Highholder or Flicker is classed as a game bird and in the other as an insectivorous bird. An effort will be made at the next session of the legislature to have this unfortunate contradiction corrected. This incident very forcibly shows how absolutely necessary it is that some person or committee with time, money, and interest in the work, shall always be on the watch to prevent changes in the non-game bird laws after they have been made satisfactory. The only absolutely sure method of prevention is to arrange to see copies of all game or bird bills introduced at every session of all the legislative bodies in the United States. This of course will necessitate a large amount of correspondence, a very considerable expenditure of money, and in case adverse bills are introduced, a fight to prevent passage.

DELAWARE. — The Audubon Society, in conjunction with the Delaware Game Protective Association, had the A. O. U. model law presented as a bill in the legislature, where it was, as usual, referred to the game committee who made an adverse report and recommended that "the bill do not pass." This necessitated a visit to Dover, Delaware, by your committee, accompanied by a delegation from both of the societies that had the bill introduced. The result was that the recommendation of the game committee was reconsidered, the bill was recommitted to the committee, who, after hearing our arguments in favor of bird protection, thus getting a clear idea of its merits made a unanimous recommendation "that the bill do pass." It was passed in the very last hours of the session and became a law March 9, 1901, by the approval of the Governor. An additional section was included in the law, at the request of the Audubon Society, to the effect that the Governor be authorized to set apart each year, by proclamation, a day

to be designated as "arbor and bird day," and to request its observance in all public schools, private schools, colleges and other educational institutions by the planting of trees and the adornment of the school and other public grounds, and by suitable exercises, having for their object the promotion of arboriculture, and the protection of birds and trees.

DISTRICT OF COLUMBIA. — The vital portions of the A. O. U. model law were embodied as a part of a new law for the protection of birds, game, and fish, passed by Congress, and approved March 3, 1901. The whole law was due to the united efforts and earnest work of Dr. Palmer of our Committee and the District Audubon Society.

Very recently Dr. Palmer, accompanied by a police officer assigned as his aid, visited every millinery establishment in the District and served a printed notice consisting of extracts from the law. This action resulted in the return to New York, and other wholesale centers of a large amount of illegal millinery ornaments, *i. e.*, plumage of wild birds. It is thought by the Committee that this is one of the best methods for breaking up the trade in wild bird plumage; if the retailers will not handle it because they fear arrest and fines, the wholesale dealers will have no market and consequently will cease to employ plume hunters along the coast.

FLORIDA. — In this State the A. O. U. model law was submitted as a bill through the influence of Mr. Robert W. Williams, Jr., a member of this Union and also a member of its Bird Protection Committee. It is largely due to the persistent, unflagging and earnest work of Mr. Williams that the state of Florida now has such an excellent bird law. Notwithstanding all that was done and said by Mr. Williams, the bill at first received an adverse report, and it became necessary for your committee to start on telegraphic notice for Tallahassee. The bill was recommitted, and after it had been thoroughly explained to the committee of both houses, and some slight amendments added to make it conform to local necessities, it received favorable report and was subsequently passed and became an operative law in sixty days, the statutory limit. While in Tallahassee the visiting members of this Committee took the occasion to give a bird talk to a large audience, among whom were the Governor and many members of the legislature.

The Thayer Fund furnished 1800 large linen warning notices, which were distributed throughout the State by different channels; subsequently the Audubon Society had a second edition of 500 printed. It is believed, on very satisfactory evidence, that the new law has stopped to a large degree the disgraceful practice of shooting 'bull bats' or Nighthawks (*Chordeiles virginianus*) for sport. No more valuable bird exists, and the passage of the law was worth all the labor it cost if it had no other result than the prevention of such acts of wanton cruelty and wastefulness.

WISCONSIN. — The passage of a new law was due entirely to the energetic work of the Audubon Society, aided by the public sentiment that had been fostered by that body.

WYOMING. — The A. O. U. model law was enacted largely by the work of our fellow member and committeeman, Mr. Frank Bond, who had a powerful auxiliary in the newspaper which he edits. Mr. Bond is actively engaged in interesting the people of his State in bird protection.

During the present legislative year (1901-02) only a few States will have legislative sessions, namely, Virginia, Georgia, Mississippi, Louisiana, Kentucky, Ohio, and Iowa; and it is the purpose of your Committee to endeavor to secure the passage of the A. O. U. model law in each State. Already Dr. Palmer and the writer have visited Georgia and have had introduced in both houses bills for the protection of the non-game birds. The bills were referred to the General Agricultural Committee in both houses, and your representatives appeared before each committee and made earnest appeals for the passage of the bill, on the ground that as Georgia was the largest fruit growing State in the South, it was extremely important that the wild birds should be protected as aids to the agricultural and horticultural interests of the State. The bill is receiving the strong support of the State Agricultural and Entomological Departments, and has already received a favorable report from the House committee to whom it was referred, has had its second reading in the House, and unless some very unexpected opposition is developed will become a law.

During the visit of your Committee it was discovered that already there was in Georgia a very considerable and growing interest in the subject of bird protection and bird study. One noble

and enthusiastic woman and bird lover, Mrs. Julius L. Brown, of Atlanta, had, unaided, secured the pledges of over 3000 of the best women of her State that they would not in the future use the plumage of wild birds as millinery ornaments. Besides this, through her efforts, over 2500 of the school children of Atlanta were subscribers to a pledge not to harm or annoy wild birds. Mrs. Brown is also a regular contributor to the Georgia press of articles relating to the preservation of bird life. The noble example of this woman is commended to the women of other sections of the country, with the earnest hope that many more may be found who will do what they can in this most laudable and important work.

PROTECTION BY WARDENS.

Probably by far the most interesting part of protection work, to the public, is the results obtained through the actual guarding of the birds during the breeding season, by wardens.

During the present year some changes were made in the personnel of the wardens, owing to a better understanding of the actual needs in each locality, that were developed by the inspections made during the season of 1900.

All of the wardens were required to make full and detailed reports in writing, on blanks furnished by the Committee, and from these the following interesting details of the results of the year's work by wardens is submitted:

MAINE. — Ten wardens were employed, each of whom protected from one to five islands which were the homes of gulls, terns or other sea birds.

L. E. Wright, of the Cross Island Life Saving Station, was in charge of Old Man, Doubleheaded Shot, Inner Libby, and The Brothers Islands; the distance from the most eastern to the most western island being about fifteen miles. He reports that he failed to see or hear of any Herring Gulls or Terns being killed on the breeding places, nor afterward. He is sure there is double the number of young gulls this autumn that he has seen any previous year.

O. B. Hall, keeper of the Crumple Island Light, was in charge of Stevens and Sand Islands, Egg and Freeman's Rocks; two of

these islands are wooded and two are simply masses of granite. The birds breeding were Herring Gulls (*Larus argentatus smithsonianus*), Terns (*Sterna hirundo et paradisæa*), Black Ducks (*Anas obscura*), Black Guillemots (*Cepphus grylle*), and Spotted Sandpipers (*Actitis macularia*). As these islands are a long distance from the mainland, very little trouble was experienced in protecting the birds and their eggs, and the warden reports that no old or young birds were killed, nor were any eggs taken.

Capt. Hall estimates that the number of young birds raised during the present season was as follows: Herring Gulls, 3000; Terns, 4000; Black Ducks, 50; Black Guillemots, 50.

Chas. Holt, keeper of the Nash Island Light, had charge of the breeding colony of Herring Gulls on Cone Island, some 800 in number. Unfortunately there was an increase of only about 100 birds; the reason for this being that the owners of the island, a mother and three daughters, seriously object to having the birds use the island as a home. They keep a large flock of sheep on the island during the whole year, in fact too many for the island to maintain. It is claimed by the owners that the gulls destroy the grass, or render it unfit for the sheep to eat, and they have used every means to drive the birds away, even going so far as to place upon the island four foxes, just before the breeding season, hoping they would destroy the eggs and young birds. This result may obtain during some sixty days in the year, but it is anticipated that next spring the foxes will destroy many newly born lambs. As a matter of fact, the gulls are probably of great benefit to the island, as the deposits of guano serve to enrich the land, and even though the grass is temporarily rendered distasteful to the sheep, during the breeding season, yet the fall rains will wash and sweeten the grass and carry the fertilizing properties to the roots.

Wm. C. Gott, keeper of the Pond Island Light, protected a large colony of Black-crowned Night Herons (*Nycticorax nycticorax naevius*) on the Douglas Islands; he states that there was a normal increase, as the birds were not disturbed, owing to the fact that he thoroughly posted the island with warning notices.

Wm. D. Upton, keeper of the Petit Manan Light, had charge of a small island called Egg Rock, on which a few terns bred; these were not disturbed at all and the increase was normal.

Great Duck Island was in charge of the owner, Dennis Driscoll, and of Wm. F. Stanley, keeper of the lighthouse located at the south end of the island. This probably is the largest colony of Herring Gulls in the United States. On the adjoining island, Little Duck, there is also a colony of a few hundred Herring Gulls. Both of these islands were thoroughly watched and the wardens report that the increase was absolutely normal. It is estimated that on the two islands, at least 2500 to 3000 young birds matured.

The birds that breed on this island are the ones that are seen about Bar Harbor and the other summer resorts on Mount Desert Island, and it will be of interest to quote from a letter accompanying a contribution from Mrs. Kennedy: "There was a perceptible increase in the numbers of sea gulls seen about Bar Harbor last summer over the year before. Much of the pleasure in sailing about Frenchman's Bay is derived from watching the various sea birds flying about, and if these can be protected and increased in numbers, I consider it a privilege to help on the good work."

The colony at No-mans-land is in charge of the owner of the island, Mark Young of Matinicus Island; this colony is probably but very little smaller than the one on Duck Island. The birds were thoroughly protected, and there is no doubt that at least 2500 young birds were matured at this station. Mr. Young, in his report, gives a very interesting incident; about the time the young gulls were full grown, flocks of them visited the grass and potato fields and ate immense numbers of grasshoppers and Colorado beetles. If the gulls, besides their work as scavengers, are also insectivorous, there is greater reason than ever why they should be protected.

James E. Hall, keeper of the light on Matinicus Rock, reports that the Terns (*Sterna hirundo et paradisæa*) and Sea Pigeons (*Cepphus grylle*) breeding there were again thoroughly protected, and consequently the increase was normal. He reports as an interesting ornithological fact that two pairs of Puffins (*Fratercula arctica*) raised young upon the island during the past season, and also that the colony of Black Guillemots was increased by at least 100 birds.

Mr. Geo. D. Pottle had charge of Shark, Egg and Western Rocks, near Friendship; he reports that the Terns (*Sterna hirundo*

et paradisæa) that bred upon the islands in his charge were molested somewhat by summer boarders and young men who shoot on Sundays; however, there was considerable increase in the number of birds in his district.

Mr. Geo. E. Cushman was in charge of Stratton and Bluff Islands, which maintained a colony of about 600 terns; he estimates that some five or six hundred young were matured; he did not see nor hear anyone shooting terns in his vicinity during the season nor experience any trouble with people seeking eggs; he adds that the prosecution that he instituted in the summer of 1900 taught the people a lesson which has not yet been forgotten.

The writer of this report visited nearly all of the colonies on the Maine coast during the height of the breeding season, occupying nearly thirty days in the work, and it is with great pleasure that he is able to report that he found all of the wardens thoroughly conscientious and very active in their duties. It is believed that the estimates of increase made by the wardens are very conservative and well within the actual facts; many more young birds in the dark plumage were seen than during the season of 1900; further, on most of the islands the breeding birds were very gentle, thus showing that they had not been disturbed to any great extent.

MASSACHUSETTS.—As usual the terns on the Muskegets were protected by our fellow-member, Mr. G. H. Mackay, and those on Penekese Island by the owners, the Messrs. Homer. These two colonies are probably as thoroughly guarded as any in the United States. A few extracts from the report of our member, Mr. R. H. Howe, Jr., who made two special trips to the Massachusetts coast, will be of interest.

"September 19. Arrived at Yarmouth and have been investigating the birds here and gaining information in regard to their being shot. Was told on every hand that but little shooting was done here now outside of that done by the boys about town and by visiting gunners; these did but little and in season only. I was told that H. Lovell and Jamieson, the lighthouse keepers at Sandy Neck, Barnstable, two years ago used to do a great deal of gull shooting for New York parties, but since laws have been passed against it they have stopped entirely, having been instructed by the New York dealers not to ship any more birds, as they could not

sell them. These two men made \$10 to \$15 a day in former years, shooting birds for the milliners.

"It would please you, I am sure, and all members of the A. O. U., to see the thousands of gulls and terns feeding off here in the harbor. From my investigations this day I feel quite confident no serious work is being carried on against the birds protected by law in this region.

"October 9. — I have returned from North Truro and report as follows: There is very little shooting being done in the region of North Truro and Provincetown at this time. I saw Small, who now does little else but shoot; but he is practically the only man who does. He is apparently a law-abiding fellow, who shoots a great deal in season and kills many birds. Last year on October 1, he told me, when the close season ended for gulls, he shot 375 birds that day, and about the same number through the rest of the week. He shipped the birds to a New York market, having been promised 12½ cents each, but from the bottom falling out of the market, as he expressed it, probably due to the A. O. U. and Audubon work, and because of the great supply, for he says every gunner on the Cape shipped birds, he never received any pay, and his loss was great on ammunition. He said he guessed shooting birds for hats was over."

NEW YORK. — The colonies of Common and Roseate Terns on Flat Hammock, Wicopesset, Little Pine, and South Dumpling Islands, near Fishers Island, were in charge of J. S. Casey to June 20, when he was taken sick and had to give up the work. Subsequently Mr. J. T. Fowler, keeper of the North Dumpling Light, assumed charge.

Mr. James H. Hill, our fellow member, who has charge of these breeding grounds reports as follows:

"I have discovered a small colony of Wilson's Terns (*Sterna hirundo*), five pairs on Goose Rock near Niantic Bay, Conn. This is a new nesting site.

"Mr. Philip J. McCook, an associate member, writes me in regard to the two small colonies of terns on the islands in Niantic Bay. The terns again used Waterford and Two-Tree Islands this year; he reports noting 12 to 13 pairs nesting on Waterford Island the last week in June, and on Two-Tree Island in first week of

July he counted about 35 terns there, but found only seven nests containing from one to three eggs each. He thinks the squatting on the island by people of the mainland to secure a title to it, the digging out and cleaning the well, and the planting and cultivation of a small potato patch has had the tendency to drive away most of the terns from their last year's breeding grounds.

"Mr. Frank Palmer, resident of Stonington, nearest Liddy Island, told me that the terns nested on the island this year, he noting 5 nests, and, further, that he had seen a pair nesting on Rocky Island, a short distance from Liddy Island; nest contained three eggs. The last is also a new nesting site.

"Flat Hammock. It was my intention, and I had made all arrangements to fully protect the breeding birds, having received, through the kindness of Mr. Charles W. Gordon, the Superintendent, and the courtesy of the Messrs. E. M. and W. Fergusons, the owners of both Flat Hammock and South Dumpling Islands, full permission to erect a shanty on South Dumpling, for the shelter of the warden, and I here wish to acknowledge their kindness and co-operation, but owing to the bad weather the latter part of May, and the inability to land materials on the island on account of rough water, and the subsequent sickness of Mr. Casey, our first warden, the middle of June, I was unable to carry out my plans. I therefore reappointed Capt. Fowler, our warden of last year, who cared for the birds the rest of the season.

"Capt. Fowler estimates that we raised, at the lowest calculation, over 1200 birds, counting Wicopesset, Flat Hammock, South Dumpling and Little Pine Island, and I think he is correct as he wrote he counted on June 20, on Flat Hammock, 663 eggs, mostly Wilson's Terns, and a few Roseates.

"Mr. Casey, our first warden, advised me in early June that a few terns were nesting on South Dumpling where we had intended to build a shanty. I found on my visit, June 20, 16 pairs nesting on an open space on the west slope of the island, so that after all we gained something by not building the shanty.

"South Hammock or South Dumpling is a short distance from Flat Hammock, about four acres in area, and rises quite abruptly from the water fifteen to sixteen feet, with not much beach. The top of the island is flat, grassy, with some bushes, and if the terns

get to using it regularly it will be a less exposed nesting place than Flat Hammock. A cabin boat for the use of the warden, anchored midway between the islands, would help to give full protection to the breeding birds, as we now have a new difficulty to contend with, *viz.*: many of the lobster and fishing boats and pleasure launches are now provided with small gasoline motors, and it has happened several times that boats of this character have run up to and made a landing on Flat Hammock and gone away before the warden could launch his boat to warn them off.

"Capt. James Smith, of the steamer 'Manhansett,' who makes daily trips to Greenport, Long Island, and whose route is through the 'Race,' tells me that he has noted a larger number of terns or mackerel gulls this year than usual, a thousand at a time, and this is the report of all the fishermen, lobstermen and blue fishing parties this season, and also of the soldiers on Great Gull Island, the former home of the terns. My own observations during my trips of inspection make me positive that no birds have been shot by plume hunters in my vicinity.

"There is not the least shadow of a doubt but that the terns are steadily increasing in numbers on Long Island Sound through the special protection given them in the breeding season, and under the wise and beneficent A. O. U. laws enacted for their protection in the different States.

"I said last year 'You may count me in as a champion of the gulls, terns and ospreys in this locality, and I shall use every means in my power to protect them,' and I shall try to place them in the protected list. The A. O. U. model is now a law of Connecticut, thanks to an intelligent legislature, the majority of whom were farmer representatives, and a Governor who did his duty, together with the hearty coöperation of the Hon. A. B. Calkins, Chairman of the Committee on Fisheries and Game. Now all wild birds are protected except hawks (Fish Hawks not included), Great Horned Owls (*Bubo virginianus*), Crows (*Corvus americanus*), and English Sparrows. Surely Connecticut is in line with her sister States in the enactment of just laws for the protection of birds."

The two colonies of terns (*Sterna hirundo et dougalli*) on Gardiners Island were in charge of the same wardens who cared for

them during the season of 1900, *viz.*, Mr. C. W. Rackett at the north end and Mr. Hiram S. Miller at the south end. Both report that they had very little trouble protecting the birds this year, owing to the fact that the inhabitants and the summer boarders are becoming acquainted with the fact that it is illegal to disturb the birds in any way, and further, because the warning notices are conspicuously placed in all parts of the breeding grounds. A very large number of young birds were matured, a conservative estimate being from 4000 to 5000.

NEW JERSEY. — Our fellow member, Mr. W. L. Baily, who had charge of the work on the New Jersey coast, made a trip to Stone Harbor and Peck's Beach July 20 "and found almost twice as many Black-headed Gulls (*Larus atricilla*) as last year. Every nest and egg was washed away by a high tide on June 17 and 18. Afterward the gulls scattered all over the meadows wherever they could find trash and suitable spots and commenced to lay again. The second nests have been undisturbed and the eggs were just hatching July 21; no young gulls were found over one day old. The eggs of the tern colony on Little Gull Island, Stone Harbor, were entirely swept away by the high tide referred to above. I saw the terns but could not find any nests."

R. S. Ludlam was the warden in charge of about four miles of beach and marsh near Stone Harbor. He reports that he protected all kinds of birds that breed in his district; a colony of 800 Black-headed Gulls (*Larus atricilla*), some Terns (*Sterna hirundo*), Fish Hawks (*Pandion haliaëtus carolinensis*), Clapper Rails (*Rallus crepitans*), and several species of land birds. He estimates that 1000 gulls were raised. He reports that he had the most trouble to keep summer boarders from shooting the birds, as they want sport and will shoot at anything. The hard storm of June 15 to 18 destroyed thousands of eggs about to hatch. He says: "I found Clapper Rails along the beach by hundreds where they had been drowned on their nests, together with their young. Many eggs had been destroyed by the tide. The survivors laid again and hatched in July.

"September 10 I saw hundreds of Black-headed Gulls catching flying ants; this had never been noticed before. There were millions of the ants about forty feet up in the air, and the gulls

were flying about among them with open mouths. The ants are here for two days about the same date each year. It is a common thing to see the terns catch the ants, also mosquitoes and grasshoppers."

Mr. J. B. Rider had charge of a small colony of terns, about 150 pairs, on the beach and marsh near Little Egg Harbor. He thinks that nearly 300 young were raised. By using the linen posters freely along the beach and watching the summer boarder with a gup, he succeeded in saving the birds.

MARYLAND. — Mr. S. B. Harman cares for the beaches and marshes near Cedar Town on which the Mackerel Gull (tern) breeds; he says "the number of birds that can be seen at one time is sufficient proof that the efforts of your society have been a great success."

VIRGINIA. — John B. Whealton, of the Wallops Beach Life Saving Station, estimates in his territory, a district of beach and marsh seven miles long, the following increase in birds; Mud Hens (*Rallus crepitans*) and Willet (*Symphemia semipalmata*), large number; Black-headed Gull (*Larus atricilla*), 2000; Strikers (*Sterna hirundo*, *S. forsteri*, and *S. antillarum*), 3000.

He had some difficulty in stopping eggging, even after the close season commenced. He thinks that the law should be changed so that eggging should not be permitted at any time.

Mr. N. B. Rich, of Assateague Beach Life Saving Station, protects a territory seven miles long by three wide. It is both sand beach and high salt meadow and was formerly an island. Birds protected were Willet, Mud Hens, Laughing Gulls, Terns and some Snipe. He estimates a large increase in the birds. He reports two cases where summer boarders killed a few terns, but promised never to do so again if not prosecuted for the first offense. "Boats used to come from New Jersey and North Carolina for the purpose of killing gulls and terns for millinery purposes but have stopped since I have been looking for them."

Mr. L. F. Taylor, of the Metomkin Beach Life Saving Station, cared for a district seven miles long, sand beach and marsh. Birds protected were Marsh Hens, Laughing Gulls, Willets, and Big and Little Strikers (*Sterna*). A normal increase took place, as on one occasion only did he have to stop illegal shooting.

Mr. J. A. D. Savage, of Wachapreague Life Saving Station, protected a territory composed of beach and marsh about three miles by two; he estimates that at least 3000 Marsh Hens, 500 Laughing Gulls, 600 Flood Gulls (*Rynchops nigra*), and 200 Terns were raised during the season. He states that so far as he knows, no birds were killed and but few eggs were taken, and he adds: "For the encouragement of your society I would say that before the efforts to protect the birds were put forth some of the species were nearly extinct, but have now increased to considerable numbers."

Mr. J. W. Richardson, of Parramores Beach Life Saving Station, cares for seven square miles of beach and marsh, principally the latter; he estimates the following increase in birds: Laughing Gulls (*Larus atricilla*), about 600; Willet, 800; Little Strikers (*Sterna antillarum*), 100; Big Strikers (*Sterna hirundo et forsteri*), 300; Mud Hens, 1000.

He adds: "There are more Black-headed Gulls this season than usual. I have walked and sailed through our marshes many times this summer, and have talked with boatmen and others, advocating the cause of birds in my own way, and I found many responsive hearers in sympathy with our work." He suggests that the Virginia law should be changed and made much more strict in order to successfully protect game and other wild birds.

Mr. John E. Johnson, of the Hog Island Life Saving Station, was in charge of about eight miles of marsh and beach on which bred: Common Tern, Gull-billed Tern (*Gelochelidon nilotica*), Laughing Gull, Black Skimmer, Willet, Wilson's Plover (*Ægialitis wilsonia*), and American Oyster-catcher (*Hæmatopus palliatus*).

He estimates the young as follows: Common Tern, 2000; Gull-billed Tern, 200; Laughing Gull, 2000; Black Skimmer, 1000; Willet, 100; Wilson's Plover, 50; American Oyster-catcher, 100. "I do not think that any birds were killed illegally, as the residents know that the law is being strictly enforced. I have a very good opportunity of knowing, as I am going through the marshes two or three times a week during the breeding season."

Mr. J. R. Andrews, of the Cobbs Island Life Saving Station, protected about six miles of beach and marsh, and also two large marsh islands of about 800 acres in area. The birds in his dis-

trict were carefully watched over, and he estimates that the increase was as follows: Black-headed Gulls (*Larus atricilla*), about 4000; Black Skimmers (*Rynchops nigra*) about 4000; Terns (*Sterna hirundo et forsteri*), about 600; Gull-billed Terns (*Gelochelidon nilotica*), about 300; Oyster-catchers (*Hematopus palliatus*), about 4; Willets (*Symphemia semipalmata*), 4; Wilson's Plover (*Egialitis wilsonia*), 2; Marsh Hens (*Rallus crepitans*), about 2,000.

He reports that about 1000 gulls' eggs, 300 terns' eggs, and 1000 marsh hens' eggs were taken by fishermen and others before the close season commenced. After that date none were taken; "I did not have as much trouble," he says, "this year as last. I think the Black-headed Gulls, Skimmers, Common Terns, and Gull-billed Terns have doubled in number since last year. The day after Mr. Kirkwood left I caught three men very neatly. I was in my lookout and saw a boat coming, and as I was satisfied I knew what they were after, I went up the beach and hid in the grass where I thought they would land. As soon as they landed I rose up with my gun right in front of them and asked them what they were after. At first they said 'nothing,' but I soon made them own up that they had come for young birds. They promised if I would let them off that they would never come again. I have not seen a man on the beach since. A great many boatmen like to eat the young Skimmers."

Mr. G. D. Hitchens, of the Smiths Island Life Saving Station, was in charge of a district about twelve miles long by from one hundred yards to one and one half miles wide, consisting of beach, marsh, and islands. The increase in the birds in his charge, as near as he can estimate, was as follows: Common Tern (*Sterna hirundo*), about 1,000; Laughing Gull (*Larus atricilla*), about 1,000; American Oyster-catcher (*Hematopus palliatus*), about 20; Wilson's Plover (*Egialitis wilsonia*), about 6; Clapper Rail (*Rallus crepitans*), about 5,000; Willet (*Symphemia semipalmata*), about 75; Royal Tern (*Sterna maxima*), about 100; Black Skimmer (*Rynchops nigra*), about 200.

"No eggs were taken on Smiths Island, but on the Isaacs all the eggs were taken until the last of July. I could not catch the one who did it but was told he was the caretaker of the United

States' Quarantine Station on Fishermans Island, which is very close to the Isaacs, while they are about three miles away from me. I think it would be a good idea to ask the Marine Hospital service to send an order to their caretaker regarding this matter; there should have been several thousand birds raised whereas there were only a few hundred. There have been no eggs taken nor birds killed on Smiths Island while I have been warden, and there are more birds now than I have seen in fifteen years."

All of the wardens in Maryland and Virginia were visited very early in August by our fellow-members, Messrs. William H. Fisher and Frank C. Kirkwood, the latter of whom made a long and detailed report, from which the following interesting items are extracted:

"I have just returned from the inspection trip and the results are most satisfactory, and, allowing for the difference of season, I think a 50 per cent increase over last year is a conservative average. At some points it was more, at some less.

"With the waders, however, it was different; they were scarce. The Willet, which breeds all along this shore, was nearly absent and comparatively few Clapper Rails were heard; this may be accounted for by the storms in May which put very high tides over the marshes.

"All the men report that no shooting was done and but very little, if any, eggng.

"I am greatly pleased with the wardens; they all greeted me by name, and said they thought I had died, as the last they had heard of me after the trip of 1900 was that I was very sick. They are all very enthusiastic over the increase in the birds. Mr. Fisher secured a number of excellent photographs, and we had some peculiar experiences, one of which was a sudden storm which overtook us; for fierceness of wind, rain, hail, thunder and lightning it surpassed anything I ever saw, and within five minutes our temperature changed from a dripping perspiration to a chill. That night, instead of reaching our destination, we were compelled at 10.30 P. M. to break into an oyster watch-house in the bay and remain there until daylight. One night the heat and mosquitoes were so bad that we climbed to the platform under the lantern of the old lighthouse on Smiths Island, 150 feet up, where we passed

the night and enjoyed a fine breeze and perfect freedom from the insect pests. What delighted me more than anything else during the trip was to discover that there was some increase in the numbers of Least Terns (*Sterna antillarum*) which may in time restock the entire coast. It is hoped that before the time for another report is reached, the Commonwealth of Virginia will have upon its statute books a law that will prevent the taking of wild birds' eggs at any time. It is a practice that there is no reason for, and is only indulged in by a few lawless persons who think that all wild things may be taken at any and all times. The great majority of the citizens of Virginia, it is believed, are heartily in favor of stopping this wasteful practice."

LOUISIANA.—As the fund collected by Mr. Thayer this year fully warranted the expenditure, the territory covered by wardens was enlarged to embrace the coast of Louisiana, which was formerly the home of immense numbers of sea birds. Owing to the depredations of plume hunters, a great many of the outlying islands and sand bars that had formerly been used as breeding places had been deserted; however, on investigation it was found that on Timbalier Island there still remained a very considerable number of birds. The laws of Louisiana afford no protection for birds, and it was found necessary to ascertain the ownership of this island, which is some fifteen miles long and is located in the parish of Terrebonne. At first it was supposed to be still State property, but on investigation it was found to be owned by the Terrebonne Land Company, one of the managers of which, Mr. J. M. Dresser, wrote as follows:

"We are perfectly willing to turn over to your society any rights that we have, to use for the purpose that you require them, the protecting of the sea birds. We think they ought not to be disturbed during the nesting season. We are in full sympathy with the purposes of your society and you can depend upon us to co-operate with you. If you will write an article and send it to the 'Times Democrat,' the most influential paper in this city, they will publish it and gladly aid in bringing the matter before the people, and try to create a sentiment which will result in a law being passed by the next legislature to protect the birds."

The details of the protection work in Louisiana were referred to

our fellow member, Mr. George E. Beyer, who kindly and generously gave largely of his time in its prosecution. He obtained from Mr. Dresser full power of attorney, attested and sworn to before a notary. On April 6, Mr. Beyer returned from a trip to Timbalier Island, an account of which is here appended :

"Last night I returned from the seacoast and the islands, whither I had gone to see what could be done for the protection of the sea birds, and how many still remained to be protected. In regard to the latter, unfortunately but few remain. I left New Orleans for Houma on the 26th of March. Immediately upon my arrival I tried to find out the sentiment of the people in regard to the proposed protection, and was rejoiced to find not a single instance of disfavor; on the contrary, people seemed to be glad that I was about to take steps for the preservation of the sea birds. My presence in Houma and its object spread like wildfire, and quite a number of men whom I met published notices of trespass. In Houma I engaged the services of a small sailing vessel, and left the town on the 28th of March. I reached the first island on the evening of the 29th, and the following morning I proceeded to Timbalier Island. I spent an entire day in a thorough investigation of this piece of land, but only the east end or Racoon Shoals has a colony of breeding birds. This colony is at once the largest and the only one of any consequence left on a stretch of seacoast of about 150 miles. In Houma I had been informed by the sheriff of Terrebonne Parish, that the man living on the island, Ferdinand Desiré, would be about the most reliable, strict, and altogether most suitable one for our purpose. I found that the man came up to every requirement, and also that he was well informed as to the species and number and strength of the remaining colonies. Becoming, in the meantime, familiar with the conditions around, I engaged him for a period of four months, his term of duty to commence on April 15. He was notified by the sheriff to come to Houma to be sworn in as deputy sheriff, and be invested with every authority the parish can possibly grant him. At this man's suggestion, I visited quite a number of other islands, but as he knew, and told me before hand, no birds are left. I enclose a map, published by Wisner and Dresser, upon which I have designated my route, and also the breeding grounds, pointed

out by Desiré, our warden, and verified by myself with the two exceptions on the mainland.

"As far as the trip is concerned I am more than satisfied. I firmly believe we will have no trouble on that section of the coast. The only weak point is this: hunters may be stopped from shooting the birds on land, but possibly could not be prevented from doing so on the water, unless I could get the authority of the United States Government to enforce the law on the three mile limit. I believe the A. O. U. might secure that for me under the Lacey Act. I think it would be well for you to look into this matter at once and do what you can. It will certainly help to make our undertaking a completely successful one."

Later on Mr. Beyer received the following letter from warden Ferdinand Desiré:

July 13, 1901.

Terrebonne Parish, Timbalier Island.

DEAR SIR:

On the 8th and 9th the wind blew very strong and the tide was very high, in fact, washed over the different islands and destroyed the eggs and young birds. There are only a few eggs and young birds left, but the old birds are still left on Racoon Pass and will very soon lay again. The same of the cranes; their nests were blown down, but the old birds are there still. Timbalier beach has suffered the same; nests and birds destroyed by the tide.

I could not leave this place as often as I would have liked; the Chinamen and fishermen were here and I had to watch to keep them from getting the eggs around Timbalier and Racoon Islands. They are all gone, the fishermen leaving on the 10th. Will make a round as often as possible and report accordingly.

Yours truly,

FERDINAND DESIRÉ.

The following letter from Mr. Beyer gives the result of the effort to protect the birds of Louisiana. It very forcibly shows how necessary it is that the birds should not be subjected to the wasteful methods of mankind when they have to contend with such natural forces as storms and tides.

"Your fears were only too well grounded, as you may perceive from the reports sent me by Desiré. Just before the storm I made an attempt to go to the islands, but could only get as far as Houma. While it is deplorable that we have lost two entire

broods, through no fault of ours, we have at least the satisfaction of having preserved the adults, and by next year I am positive we will have the State laws on our side. I am quietly working now and I think we will experience no opposition or difficulty to gain all our points."

In the several localities where the warden system was employed the results fully warrant the outlay of funds made, and a continuance and extension of the system. It has been thought advisable to append to this report a copy of the model law advocated by the A. O. U., in order that the press and the public may be able to examine it, and, it is hoped, advocate its passage in Commonwealths where the present bird laws are insufficient to give absolute protection to the non-game birds.

LEGISLATION FOR THE PROTECTION OF BIRDS.

ACT PROPOSED BY THE AMERICAN ORNITHOLOGISTS' UNION.

An Act for the Protection of Birds and their Nests and Eggs.

Section 1. No person shall, within the State of —, kill or catch or have in his or her possession, living or dead, any wild bird other than a game bird, or purchase, offer, or expose for sale, transport, or ship within or without the State, any such wild bird after it has been killed or caught. No part of the plumage, skin, or body of any bird protected by this section shall be sold or had in possession for sale except as permitted by this act. For the purposes of this act the following only shall be considered game birds: The Anatidæ, commonly known as swans, geese, brant, and river and sea ducks; the Rallidæ, commonly known as rails, coots, mud-hens and gallinules; the Limicolæ, commonly known as shore birds, plovers, surf birds, snipe, woodcock, sandpipers, tatlers, and curlews; the Gallinæ, commonly known as wild turkeys, grouse, prairie chickens, pheasants, partridges, and quails.

Sec. 2. No person shall, within the State of —, take or needlessly destroy the nest or the eggs of any wild bird other than a game bird, or have such nest or eggs in his or her possession except as permitted by this act.

Sec. 3. Any person who violates any of the provisions of this act shall be guilty of a misdemeanor, and shall be liable to a fine of — dollars for each bird, living or dead, or part of bird, or nest, or set of eggs, or part thereof, possessed in violation of this act, or to imprisonment for ten days, or both, at the discretion of the court.

Sec. 4. Sections 1, 2, and 3 of this act shall not apply to any person holding a certificate giving the right to take birds, their nests, or eggs for scientific purposes, as provided for in section 5 of this act.

Sec. 5. Certificates may be granted by [here follow the names of the persons], if any, duly authorized by this act to grant such certificates, or by any incorporated society of natural history in the State, through such persons or officers as said society may designate, to any properly accredited person of the age of fifteen years or upward, permitting the holder thereof to collect birds, their nests or eggs, for strictly scientific purposes only. In order to obtain such certificate the applicant for the same must present to the person or persons having the power to grant said certificate written testimonials from two well-known scientific men, certifying to the good character and fitness of said applicant to be intrusted with such privilege; must pay to said persons or officers one dollar to defray the necessary expenses attending the granting of such certificates; and must file with said persons or officers a properly executed bond, in the sum of two hundred dollars, signed by two responsible citizens of the State as sureties. On proof that the holder of such a certificate has killed any bird, or taken the nest or eggs of any bird, for other than scientific purposes his bond shall be forfeited to the State, and the certificate become void, and he shall be further subject for each such offense to the penalties provided therefor in section 3 of this act.

Sec. 6. The certificates authorized by this act shall be in force for one year only from the date of their issue, and shall not be transferable.

Sec. 7.¹ The English or European house sparrow (*Passer domesticus*) is not included among the birds protected by this act.

Sec. 8. All acts or parts of acts, heretofore passed, inconsistent with or contrary to the provisions of this act, are hereby repealed.

Sec. 9. This act shall take effect upon its passage.

THE THAYER FUND.

The treasurer of the fund attaches a statement showing the subscriptions and disbursements during the year ending November 1, 1901, the correctness of which he certifies to.

¹ Where it is absolutely necessary to exclude any birds from protection they may be added to Section 7, so as not to alter the main text.

NEW YORK, NOV. 1, 1901.

WILLIAM DUTCHER, *Treasurer.*

IN ACCOUNT WITH THAYER FUND.

Balance brought forward from 1900 \$449.98

SUBSCRIPTIONS.

J. M. Sears	\$200.00	D. C. McEwen	\$10.00
C. L. Freer	150.00	Jno. D. Hicks	10.00
Ellen R. Pickman	150.00	R. C. Robbins	10.00
A. Hemenway	100.00	W. S. Peele	10.00
Louisa L. Kane	100.00	C. E. Norton	5.00
Mrs. A. Hemenway	100.00	Wm. Amory	5.00
Wm. Brewster	100.00	Misses Merriman	5.00
Ellen J. Stone	50.00	Miss A. C. Gelpcke	5.00
Mary Lionberger	30.00	Miss Jean Ricketts	5.00
H. Y. S. Hunnewell	25.00	Jno. Donaldson	5.00
S. O. Metcalf	25.00	Emily Howland	5.25
Mrs. J. S. Kennedy	25.00	W. H. Aspinwall	5.00
Miss E. L. O.	25.00	Mrs. Z. Chaffee	5.00
Edith C. Macy	25.00	Frank M. Day	5.00
Frank J. Heckel	25.00	S. Brooks	5.00
A. A. Lawrence	25.00	Mrs. F. T. Gray	5.00
H. S. Hunnewell	25.00	Mrs. R. M. Lawrence	5.00
Walter Hunnewell	25.00	Miss Lucy H. Baird	5.00
Dean Sage	20.00	Mary I. Corning	5.00
Col. O. H. Payne	20.00	H. H. White	5.00
H. M. Hanna	20.00	Miss Cowper Lord	5.00
W. B. Dickerman	20.00	M. Benj. Nicoll	5.00
Conn. Audubon Society	20.00	W. G. Van Name	5.00
Miss Mary A. Greene	20.00	F. R. Bangs	5.00
Mrs. R. G. Shaw	20.00	Jno. L. Cox	5.00
Mrs. T. M. Brewer	20.00	Ralph W. Trine	5.00
Mr. & Mrs. W. M. Smith	15.00	Etta F. Miles	
Caroline P. Latimer	15.00	(Six children's clubs)	3.75
Miss Fannie Dwight	10.00	Miss Anna D. Ludlow	3.00
S. H. Wheeler	10.00	Helen P. Haskell	3.00
Rev. G. F. Weld and wife	10.00	Elizabeth Christian	3.00
Mary L. Parsons	10.00	Miss E. A. Dana	3.00
Ellen D. Sharp	10.00	Annie M. Archer	3.00
Mrs. Lowell	10.00	Royal E. Robbins, 2nd	3.00
Ellen Collins and sister	10.00	29 contributions from \$2.00 to	
Cash	10.00	10 cents each	32.65
			\$1679.65
			\$2129.63

EXPENDITURES.

Virginia.

F. C. Kirkwood, Trav. expenses . . .	\$40.00	
8 wardens	<u>140.00</u>	\$180.00

Maryland.

F. C. Kirkwood, Trav. expenses . . .	4.35	
1 warden	<u>25.00</u>	29.35

New Jersey.

W. L. Baily, Trav. expenses — Inspection .	4.00	
W. Dutcher, “ “ to Legislature .	3.25	
Dr. Palmer, “ “ “ “ .	8.25	
W. D. W. Miller, “ “	3.00	
Telegram and sundries75	
Copy of law	2.00	
2 wardens	<u>40.00</u>	
Maps50	
Warning notices	<u>13.00</u>	74.75

New York.

W. Dutcher, Trav. expenses to Legislature .	32.54	
E. Hicks, “ “	12.19	
Copies of law	5.00	
Advertising	3.00	
Telegrams and telephone	7.55	
3 wardens	<u>60.00</u>	
Warning notices	<u>13.00</u>	133.28

Connecticut.

One warden	<u>20.50</u>	20.50
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Maine.

W. Dutcher, Trav. expenses to Legislature .	38.82	
Dr. Palmer, “ “ “ “ .	44.00	
Advertising law	6.50	
Express	1.05	
Copies of law	4.00	
Posting notices on islands	5.00	
Telegrams	1.16	
Postage on notices	9.00	
Warning notices	18.40	
11 wardens	<u>353.30</u>	481.23

Delaware.

W. Dutcher, Trav. expenses to Legislature .	10.03	
W. Stone, “ “ “ “ .	<u>6.00</u>	16.03

Louisiana.

G. E. Beyer, Trav. expenses	39.25	
1 warden	<u>160.00</u>	199.25

Texas.

Birds used in evidence (case won)	<u>10.10</u>	10.10
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Massachusetts.

R. H. Howe, Jr., Trav. expenses	8.33	
1 detective, 1 month, salary & trav. exp.	<u>146.89</u>	155.22

Florida.

Dr. Palmer, Trav. expenses to Legislature	25.70	
W. Dutcher, " " " "	88.04	
R. W. Williams, Jr., sundries	5.00	
Warning notices	<u>32.05</u>	150.79

New Hampshire.

Warning notices	<u>10.00</u>	10.00
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Georgia.

W. Dutcher, Trav. expenses to Legislature	98.24	
Dr. Palmer, " " " "	<u>17.25</u>	115.49

GENERAL EXPENSES OF COMMITTEE.

Postage	86.00		
Printing	50.83		
Clerical work	31.30		
Letter cases	1.50		
Clasp envelopes for mailing reports	11.25		
Exchange20		
Copies of state laws	5.00		
Protection Committee reports	39.00		
Reports of Ill. and Mass. Aud. Societies	3.34		
W. D., Trav. exp. to Washington	14.25		
Telegrams72		
Sundries	<u>8.65</u>	<u>252.04</u>	<u>683.54</u>
			\$1828.03
Balance forwarded to 1902			<u>301.60</u>
			<u>\$2129.63</u>

The above report and financial statement are

Respectfully submitted for the Committee,

WILLIAM DUTCHER.

New York City, November 1, 1901.

PROTECTION COMMITTEE FOR 1902.

WILLIAM DUTCHER, *Chairman*, 525 Manhattan Ave., New York, N. Y.

ABBOTT H. THAYER, Monadnock, New Hampshire.

JOHN M. SWAIN, Portland, Maine.

RALPH HOFFMANN, Belmont, Mass.

JAMES H. HILL, New London, Conn.

WILLIAM L. BAILY, Ardmore, Pa.

FRANK C. KIRKWOOD, Baltimore, Md.

ROBERT W. WILLIAMS, JR., Tallahassee, Florida.

PROF. GEO. E. BEYER, New Orleans, La.

FRANK BOND, Cheyenne, Wyoming.

MRS. FLORENCE MERRIAM BAILEY, Washington, D. C.

EDWARD B. CLARK, Chicago, Ill.

MRS. LOUISE MCGOWN STEPHENSON, Helena, Ark.

A. W. ANTHONY, Portland, Oregon.

Sub-Committee on Laws.

T. S. PALMER, M. D., Washington, D. C.

NINETEENTH CONGRESS OF THE AMERICAN
ORNITHOLOGISTS' UNION.

THE NINETEENTH CONGRESS of the American Ornithologists' Union convened in New York City Monday evening, November 11, 1901. The meetings were held at the American Museum of Natural History, the public sessions commencing Tuesday, November 12, and lasting three days.

BUSINESS SESSION.—The meeting was called to order by the President, Dr. C. Hart Merriam. Sixteen Active Members were present. The Secretary's report gave the membership of the Union at the opening of the present Congress as 738, constituted as follows: Active, 44; Honorary, 16; Corresponding, 62; Associate, 616.

During the year the Union lost seventy-seven members—eleven by death, twenty-four by resignation, and forty-two were dropped for non-payment of dues. The deceased members include one Honorary, four Corresponding and six Associate members, as follows: Dr. Gustav Hartlaub,¹ an Honorary Member, who died November 20, 1900, in the 87th year of his age; Dr. C. A. Altum, a Corresponding Member, who died January 1, 1900; Dr. John Anderson,² a Corresponding Member, who died August 15, 1900, aged 66 years; the Abbé Armand David,³ a Corresponding Member, who died November 19, 1900, aged 74 years; Baron Edmond de Sélys Longschamps,⁴ a Corresponding Member, who died December 11, 1900, at the age of 87; George A. Boardman,⁴ an Associate Member, who died at Calais, Maine, January 11, 1901, aged 83; Capt. John Clifford Brown,⁵ an Associate Member, who died at Los Angeles, Cal., January 16, 1901, aged 29; Newton Dexter,⁷ who died at Seaconnet Point, R. I., July 27, 1901; James MacKinlay,⁶ an Associate Member, who died in Pictou, Nova Scotia, November 30, 1899, aged 81; Francis J. Birtwell,⁷ an Associate Member, who died at Willis, N. M., June 28, 1901, aged 21 years; and Rev. George S. Mead, an Associate Member, who died in Guatemala, June 19, 1900.

The report of the Treasurer showed the finances of the Union to be in good condition.

All of the officers were reelected, as follows: Dr. C. Hart Merriam, President; Charles B. Cory and Charles F. Batchelder, Vice-Presidents; John H. Sage, Secretary; William Dutcher, Treasurer; Frank M. Chapman, Ruthven Deane, E. W. Nelson, Witmer Stone, Drs. A. K. Fisher, Jonathan Dwight, Jr., and Thos. S. Roberts, members of the Council.

Certain amendments to the By-Laws, proposed at the last Congress of the Union, were adopted, whereby the former class of

¹ For an obituary notice, see *Auk*, XVIII, p. 219.

² For an obituary notice, see *Ibid.*, XIX, p. 118.

³ For an obituary notice, see *Ibid.*, XVIII, pp. 292.

⁴ For an obituary notice, see *Ibid.*, pp. 219.

⁵ For an obituary notice, see *Ibid.*, pp. 220.

⁶ For an obituary notice, see *Ibid.*, p. 221.

⁷ For an obituary notice, see *Ibid.*, pp. 413.

Active Members became Fellows, and Associate Members became Associates. A class of membership was established, intermediate between Fellows and Associates, to be known as Members, limited in number to seventy-five. The nomination of Members must be made by the Council to the Union, and the affirmative votes of three fourths of the Fellows present will be necessary to a choice. The membership of the Union now consists of the following classes: Fellows, Honorary Fellows, Corresponding Fellows, Members, Associates, and Patrons.

Outram Bangs, of Boston; Joseph Grinnell, of Palo Alto, Cal.; Dr. T. S. Palmer and Prof. F. E. L. Beal, of Washington, D. C., and Dr. Louis B. Bishop, of New Haven, Conn., were elected Fellows. Montague Chamberlain, of Boston, on resignation from the Active list, was elected a Corresponding Fellow. Eighty-three new Associates were elected, and the following fifty-five persons were elected to the new class of Members, namely: Francis H. Allen,¹ H. P. Attwater, Mrs. Florence Merriam Bailey, Vernon Bailey, William L. Baily, Chester Barlow, Prof. George E. Beyer, Frank Bond, Clement S. Brimley, Herbert Brown, Prof. Lawrence Bruner, William A. Bryan, Frank L. Burns, Amos W. Butler, George K. Cherrie, John N. Clark, Frank S. Daggett, Walter Deane, Prof. Barton W. Everman, John Fannin, Walter K. Fisher, James H. Fleming, Louis Agassiz Fuertes, Manly Hardy, Ralph Hoffmann, William A. Jeffries, Rev. Herbert K. Job, Lynds Jones, Prof. David Starr Jordan, Dr. Sylvester D. Judd, George H. Mackay, John W. Mailliard, Joseph Mailliard, Richard C. McGregor, Gerrit Smith Miller, Jr., Mrs. Olive Thorne Miller, John Murdoch, Harry C. Oberholser, Wilfred H. Osgood, Charles J. Pennock, Edward A. Preble, William W. Price, Dr. William L. Ralph, Samuel N. Rhoads, Dr. William C. Rives, Capt. Wirt Robinson, U. S. A., Jewell D. Sornborger, Frank Stephens, Abbott H. Thayer, Ernest Thompson Seton, W. E. Clyde Todd, Bradford Torrey, Charles H. Townsend, Dr. Spencer Trotter, Mrs. Mabel Osgood Wright.

Drs. Merriam, Allen, Dwight and Richmond, and Messrs. Brewster, Ridgway and Stone were elected 'Committee on Classification and Nomenclature of North American Birds.'

¹ The addresses of the new Members-elect may be found by reference to the Membership List published in 'The Auk' for October, 1901.

PUBLIC SESSION. *First Day.* The meeting was called to order by the President, Dr. Merriam. An address of welcome was made by Prof. H. C. Bumpus on behalf of the President and Trustees of the American Museum of Natural History, to which a fitting response was made by the Chair.

The scientific proceedings began with a paper by Dr. J. A. Allen, entitled 'The Present Outlook for Stability in Nomenclature.' Remarks followed by the Chair.

Next came 'The Plumages of the American Goldfinch (*Spinus tristis*),' by Dr. Jonathan Dwight, Jr. Remarks followed by Messrs. Chapman, Oberholser and Batchelder, and Dr. Allen.

The third title was 'On Methods in Museum Bird Exhibits,' by Mr. Frank M. Chapman. In this connection Dr. Merriam called attention to the numerous fine groups of birds forming a part of the ornithological exhibit of the American Museum of Natural History, especially to a late addition representing the colony of breeding sea birds at Bird Rock, in the Gulf of St. Lawrence.

The opening paper of the afternoon session was by James H. Hill, entitled 'The White-winged Crossbill in Captivity.' Remarks followed by Mr. Chapman.

The second title was 'Some Impressions of Texas Birds,' by Louis Agassiz Fuertes and H. C. Oberholser. Remarks followed by Mr. Brewster and Mr. Oberholser.

'Ornithological Notes from Northern New Hampshire,' by Judge John N. Clark, was the title of the third paper. Remarks followed by Messrs. Brewster and Stone.

The concluding paper of the day was 'Routes of Bird Migration across the Gulf of Mexico,' by Prof. W. W. Cooke. In the absence of the author, it was read by Dr. T. S. Palmer. Remarks followed by the Chair, Drs. Palmer and Mearns, and Messrs. Chapman and Nelson.

Second Day. — The meeting was called to order by the President. The first paper, by Dr. J. A. Allen, was entitled 'The American and European Herring Gulls.' Remarks followed by Dr. Dwight and Mr. Oberholser.

The second paper was entitled 'Auduboniana,' by Ruthven Deane, accompanied by an exhibition of books, manuscripts, etc., formerly belonging to Audubon.

The third paper was 'The Moults and Plumages of the North American Ducks (Anatidæ),' by Dr. Jonathan Dwight, Jr. Remarks followed by Mr. Stone and the author.

The concluding paper of the morning, 'Remarks on Seven Birds from the Southern United States,' was by Dr. E. A. Mearns.

The afternoon session, held in the large Lecture Hall of the Museum, was devoted to the following papers, all being illustrated by lantern slides, viz.: 'A Naturalist in Yucatan,' by E. W. Nelson; 'Photography in North Dakota Bird Colonies,' by the Rev. H. K. Job; and 'A Reconnaissance in Manitoba and the Northwest,' by Frank M. Chapman.

Third Day.—The meeting was called to order by the President, Dr. Merriam. The first and second papers of the morning, 'Are Hummingbirds Cypseloid or Caprimulgoid?' by Hubert Lyman Clark, and a 'List of Birds of Wequetonsing, Mich.,' by Otto Widmann, were read by title. The third paper, 'Notes on the Ornithological Observations of Peter Kalm,' by Dr. Spencer Trotter, was read, in the absence of the author, by Dr. Allen.

Resolutions were adopted thanking the Trustees of the American Museum of Natural History for a place of meeting and for other courtesies tendered to the Union; to the Linnæan Society of New York for generous hospitalities extended to the Union during its Nineteenth Congress; and to the Zoölogical Society of New York for its kind invitation to visit the Society's Zoölogical Gardens.

The afternoon session, held in the large Lecture Hall of the Museum, was a joint meeting of the Union and the Audubon Societies of the United States.

Mr. Ruthven Deane called attention to certain paintings by Audubon which were on exhibition in the Hall.

Mr. Witmer Stone, Chairman of the Committee on Protection of North American Birds, read the report of his Committee for the previous year. Mr. William Dutcher followed, giving 'Results of Special Protection to Gulls and Terns obtained through the Thayer Fund,' and Dr. T. S. Palmer gave an address on 'National Bird Protection—Its Opportunities and Limitations.'

The concluding papers were illustrated by lantern slides, viz.: 'Gulls of the Maine Coast, and Miscellaneous Notes,' by Wil-

liam Dutcher and Wm. L. Baily; 'Some Results of Bird Protection,' by Frank M. Chapman.

The Congress then adjourned, to meet in Washington, D. C., November 17, 1902.

JNO. H. SAGE,
Secretary.

DESCRIPTIONS OF THREE NEW BIRDS OF THE
FAMILIES MNIOTILTIDÆ AND CORVIDÆ.

BY ROBERT RIDGWAY.

(By permission of the Secretary of the Smithsonian Institution.)

Compothlypis pitiayumi speciosa.—CHIRIQUEI PARULA WARBLER.

Similar to *C. p. pitiayumi* and other South American subspecies, but darker and bluer above, and middle wing-coverts without white tips; similar in last character to *C. p. inornata*, of Guatemala, but much more richly colored.

Nicaragua to Chiriqui.

Type, no. 177411, coll. U. S. Nat. Mus., Boquete, Chiriqui, March 7, 1901; W. W. Brown, Jr., collector; received from Outram Bangs.

Dendroica vigorsii abacoensis.—ABACO PINE WARBLER.

Similar to *D. v. vigorsii* but decidedly larger and with relatively shorter wing; differing from *D. vigorsii achrustera* (Bangs), of New Providence Island, in being decidedly larger and in brighter yellow of under parts.

Adult male: Wing, 70 mm.; tail, 57; exposed culmen, 13.5; depth of bill at nostrils, 5; tarsus, 20; middle toe, 13.5.

Island of Abaco, Bahamas.

Type, no. 108479, coll. U. S. Nat. Mus., Abaco Island, Bahamas, April 1886; Willard Nye.

Aphelocoma texana.—TEXAN JAY.

Similar to *A. cyanotis* but white superciliary streak more distinct, under parts much paler and browner gray, the lower throat and chest without blue streaks (obsoletely streaked with pale grayish). Differing from *A. woodhouseii* in obsolete streaking of chest and lower throat, much paler and browner gray of breast, etc., and pure white under tail-coverts.

Southwestern Texas, from Concho and Kerr Counties west to the Davis Mts. (Alpine, Ft. Davis, Paisano, etc.).

Type, no. 150507, coll. U. S. Nat. Mus., adult female, near head of Nueces R., Edwards, Co., Texas, Dec. 1, 1894; H. P. Attwater.

TWO SUBSPECIES WHICH SHOULD BE ADDED TO
THE CHECK-LIST OF NORTH AMERICAN BIRDS.

BY EDGAR A. MEARNS.

Mimus polyglottos leucopterus (Vigors).**WESTERN MOCKINGBIRD.**

Orpheus leucopterus VIGORS, Zool. Beechey's Voyage of 'Blossom,' 1839, p. 18 (Pacific coast of North America).

Mimus leucopterus BAIRD, Stansbury's Report, Great Salt Lake, 1852, p. 328.

Geographical Distribution.—Southwestern United States, from the Gulf of Mexico (Texas) to the Pacific Ocean, and southward into Mexico, including all of Lower California; resident in the southern and lower portions of its range, migratory in the northern and higher portions.

Characters.—Similar to but larger than *Mimus polyglottos polyglottos*, with tail relatively rather short (measuring about the same), wings 5 to 10 mm. longer, feet stouter, bill slightly longer and more slender. General color paler than in *polyglottos*, less grayish (more drab), and with the underparts more washed with clay-color; white markings, especially those of the wings, more extended; wing-quills all tipped with white; tertials edged with grayish or brownish white. The greater extent of white on the bases of the primaries is conspicuous during flight; and the two white bands caused by the white tips of the wing-coverts are much broader.

Remarks.— Under the appropriate name of *leucopterus*, the Western Mockingbird was described by Vigors, from specimens collected during the voyage of the 'Blossom,' which visited various ports on the west coast of Mexico and California. He states that none of his specimens were labelled with the exact locality.

Professor Spencer F. Baird next recognized the peculiarities of the Mockingbird of California, which he described,¹ remarking: "It is probably this variety that Vigors had in view when describing *Orpheus leucopterus* from the west coast of America (Zool. Beechey, 1839, 18), although this has the wing 5.75 inches long, instead of 4.50. Should further researches substantiate a specific distinction from both the *polyglottus* and Vigors's bird, the name of *Mimus canadatus* [typographical error for *caudatus*, which name appears on pages xxxv (*sic*) and 987 of the same work] would be very appropriate, in view of the lengthened tail." Baird's name *caudatus* was applied to the Mockingbird of the West by numerous writers, including Xantus, Cooper, Coues, and Ridgway, and was more or less in current usage for about twenty years, after which it was dropped even as a subspecific term, because of the discovery that the tail-pattern could be matched on comparison of eastern with western birds, and that the Mockingbird of Florida possesses a longer tail than that of California. Again, in 1888, Doctor J. A. Allen² gave the true characters of the Western Mockingbird, based on specimens in the Scott collection, from Arizona, where the race has acquired its maximum differentiation.

The characters which I have given are based on an examination of all the specimens in the collections of the United States National Museum and the American Museum of Natural History, in New York. I have also tabulated the measurements of seventy-five specimens of both forms, taken by myself from fresh specimens, collected in the region extending from Georgia and Florida to the coasts of California and Mexico. All of the Texan specimens examined were the western form, not extreme, but easily separated from *polyglottus* by the larger amount of white on the bases of the primaries, and the paler and more drab coloration. Its range, as

¹ U. S. Pacific Railroad Rep., IX, Birds, 1858, p. 345.

² 'The Auk,' Vol. V, April, 1888, p. 160.

shown by specimens in the United States National Museum, extends from old Fort Cobb, Indian Territory, south to Monterey and over the tableland of Mexico to Mazatlan, and even to Tehuantepec City, in the State of Oaxaca, on the west coast of Mexico (specimen No. 59673, U. S. N. M.).

Tyrannus tyrannus vexator Bangs.

FLORIDA KINGBIRD.

Tyrannus tyrannus vexator BANGS, Auk, XV, April, 1898, p. 178 (Merritt's Island, Indian River, Florida).

Geographical Distribution.—Southern Florida.

Characters.—A series of breeding specimens of this form, collected by the writer during April and May, 1901, in the Kissimmee Valley, southern Florida, emphasizes the characters assigned to it by Mr. Bangs in the original description. The form may be recognized by its stout bill (about 2 mm. broader than that of typical *tyrannus*) short tarsus, robust feet, and the darker and more uniform coloration of the upper surfaces.

Measurements.—Average of three adult males from the Kissimmee Valley, Florida: Length, 219 mm.; alar expanse, 383; wing, 122; tail, 94; culmen (chord), 18; bill, measured from nostril, 15; tarsus, 18.7; middle toe with claw, 20.8. Average of four adult females from the Kissimmee Valley, Florida: Length, 217; alar expanse, 369; wing, 116; tail, 90; culmen, 18.9; bill from nostril, 14.6; tarsus, 19.4; middle toe with claw, 21.

Nest and eggs.—Set A/3, with both parents (Nos. 12585 and 12586 Mearns collection; all in the U. S. National Museum collection). The nest was placed about 6 meters above the ground, on a side branch of a persimmon-tree which stood beside an 'old river' connecting lakes Cypress and Tohopekaliga, in Osceola County, Florida. It was composed, outwardly, of small sticks and plant-stems, and lined with the wool of sheep. On May 3, 1901, it contained three eggs, similar to those of the common Kingbird, and measuring, respectively, 24.2 by 18.3 mm., 25 by 18.4, and 25 by 18.

Remarks.—This subspecies breeds abundantly in southern Florida where it is known only as the 'Bee Martin.'

DESCRIPTION OF A HYBRID BETWEEN THE BARN
AND CLIFF SWALLOWS.

BY EDGAR A. MEARNS.

IN THE 'Bulletin of the Nuttall Ornithological Club,' Vol. III, No. 3, July, 1878, page 135, Doctor Spencer Trotter described a hybrid between *Hirundo erythrogaster* Boddaert and *Petrochelidon lunifrons* (Say). The specimen was taken at Linwood, Delaware County, Pennsylvania, May 22, 1878, by C. D. Wood. "Unfortunately he [Wood] did not carefully determine its sex by dissection, though he believed it to have been a male."

On June 14, 1893, at Fort Hancock, El Paso County, Texas, I found a pair of swallows which were mated, and had almost completed a nest attached to a rafter of an old building, in a situation too difficult for me to reach. As I recall it, the nest was similar to that of the Barn Swallow, having the entrance at the top. Both birds were shot. The male (No. 134,420, U. S. National Museum) was a typical Barn Swallow; but the female (No. 134,421, U. S. National Museum), which was about to lay eggs, was a hybrid between *Hirundo erythrogaster* and *Petrochelidon lunifrons*.¹ It may be described as follows: Length, 149 mm.; alar expanse, 296; wing, 107; tail, 59; culmen (chord), 8; tarsus, 12; middle toe with claw, 15.8.² The characters are, in general, intermediate between those of the two genera — *Hirundo* and *Petrochelidon* — and species. As regards the form of the bill and the form and

¹ The resident Cliff Swallow of the Rio Grande Valley is *Petrochelidon lunifrons*, not *P. melanogaster*, which latter occurs on the Mexican boundary line to the westward, from the San Luis Mountains to Nogales (monuments 65 to 122 of the latest survey). See Proc. Biol. Soc. Washington, Vol. XIV, September 25, 1901, p. 177.

² Its mate, a typical male of *Hirundo erythrogaster*, measures: Length, 169; alar expanse, 308; wing, 114; tail, 82; culmen, 6.9; tarsus, 11; middle toe with claw, 16.2.

An adult female of *Petrochelidon lunifrons* (No. 163,687, U. S. National Museum), taken at Fort Clark, Kinney County, Texas, April 28, 1898, measures: Length, 145; alar expanse, 300; wing, 106; tail, 53; culmen, 7.7; tarsus, 14.5; middle toe with claw, 16.

position of the nostrils this is precisely the case. The wing is but slightly longer than that of the Cliff Swallow. The tail is forked, and of intermediate length. The feet are intermediate, but most resemble those of the Cliff Swallow. The colors of the iris, bill, and feet, were noted at the time of capture as indistinguishable from those of its mate—a Barn Swallow. In coloration, the wings and tail are intermediate between those of the two species, which are brown in the Cliff Swallow and blue in the Barn Swallow. The forehead is ferruginous, as in the Barn Swallow; but the sides of the head and neck, behind the eye, where blue in the Barn Swallow and ferruginous in the Cliff Swallow, are an intimate mixture of the two. On the back, the buffy-white edging of the feathers is apparent, but not so plainly indicated as in the Cliff Swallow (the whole upper surface, except the ferruginous frontal band, is uniform steel-blue in the Barn Swallow). The rump and upper tail-coverts differ from those of either species, although the pattern is that of the Cliff Swallow; the color instead of tawny-ochraceous is cream-buff, lightly and irregularly spotted with blue, the longest coverts being purplish brown. The under parts most closely resemble those of the Barn Swallow; chin and throat hazel, darker than the Barn Swallow and lighter than the Cliff Swallow, from which latter it differs in having the hazel color more extended posteriorly, and in lacking the black pectoral spot. The whole underparts, including the under tail-coverts, are washed with ferruginous, but less strongly so than in the Barn Swallow. The under wing-coverts are intermediate. Two outer rectrices are spotted with grayish white on the inner webs, these being immaculate in the Cliff Swallow, spotted in the Barn Swallow.

GENERAL NOTES.

Franklin's Gull in the Virginia Mountains.—I desire to place upon record the capture by myself of a stray specimen of Franklin's Rosy Gull (*Larus franklinii*) at Blacksburg, Montgomery Co., Virginia (No. 757, coll. E. A. S.). This is a first record for the State; and I have as yet seen no other record for the Eastern States. On the 24th of October, 1898, I was

returning from a tramp with two students, and as I neared the College ice pond, a gull flew over my head from behind me; for a second I hesitated, thinking it was Bonaparte's Gull, which I have taken here in the mountains on several occasions; I fired, however, and killed the bird, and was surprised on picking it up to find it was not what I had supposed, nor did I recognize it. A momentary suspicion that it was a Kittiwake—the only likely bird I could otherwise think of—was dispelled by noticing the dark carmine bill, which, as the specimen was adult, eliminated the Kittiwake. On reaching home, Ridgway's 'Manual' and Coues's 'Key' readily ran it out to Franklin's Rosy Gull, there being no mistaking the two descriptions, and I have since amply verified the identification. The Gull was an adult ♀ and the under parts were quite rosy and the plumage unworn. A trace of the rosy color still remains. This is not quite as remarkable as my capture here of the Black-capped Petrel in 1893 (see Auk, Vol. X, p. 361), for Franklin's Gulls breed in Iowa: Blacksburg, Va., is only a few miles from New River, a tributary of the Ohio. I suppose the bird may have followed the Mississippi to the Ohio and so up to this remote locality. Sea and shore birds are found here with more or less regularity. Ducks come every spring, and I have shot the Black-head; the Horned Grebe is occasionally found, and Geese occur at intervals in their season. On May 7 last, I had a fine fresh Canada Goose, ♀, brought to me, still warm, one of three that were killed on New River that day. This is very late for geese.—ELLISON A. SMYTH, JR., *Virginia Polytechnic Institute, Blacksburg, Va.*

Remarkable Flight of Gulls at Cumberland, Md.—On Sunday, April 26, 1901, the people of Cumberland were astonished to find a flock of about 50 gulls flying over and around the city, especially about the confluence of Will's Creek with the Potomac. There had been excessive rains for three days previous, and high winds, which no doubt account for this large flight. For while occasionally a few stray up here, there had never so many been seen together. Most of them went away after having been here a day; some, however, stayed around till the middle of the week. The greater part were Bonaparte's Gull (*Larus philadelphia*), the rest, three to five, American Herring Gulls (*Larus argentatus smithsonianus*). A few of the former were shot by hunters and brought to me. They were in perfect nuptial plumage. They all had large black beetles and some bits of offal in their stomach.

At the same time two specimens of *Larus philadelphia* were sent to me from Accident, Garrett Co., Md., where they had been shot by the owner of a small fish pond, near the same. These two, however, had still a few white feathers on their heads. Also in that week I received one American Herring Gull and one Bonaparte's Gull from Confluence, Somerset Co., Pa. This, according to my mind, goes to show that the atmospheric disturbances accompanied by great floods in these parts had the effect of making many gulls temporarily leave their usual homes.—G. EIFRIG, *Cumberland, Md.*

A Supposed New Colony of Least Terns on Marthas Vineyard.—In July, 1901, while on a visit to Katama Bay and the eastern end of Marthas Vineyard with a collecting party from the U. S. Fish Commission Station at Woods Hole, I found a young Least Tern (*Sterna antillarum*) running on the shore near a marshy strip on the edge of the bay. An inspection of the marsh showed it to be a breeding place for this species, as a number of eggs were observed in a hasty examination, although it appeared that most of the eggs must have hatched. Several adults came within close range of the collecting party seining on the shore. On each of several other visits to the bay in July, August and September, a few Least Terns were noticed, but it was not until about the first of October that the birds were observed in flocks and some idea could be formed of their number. Two separate flocks were found on the beach one day, and it was the estimate of Mr. V. N. Edwards, of the Fish Commission, and myself that each flock contained about 500 old and young birds.

I have been visiting Katama Bay in summer and fall for three or four years, and have not previously observed Least Terns there. Mr. Edwards, who has been very familiar with the region for more than thirty years and knows the birds very intimately, does not remember to have found the birds in such numbers before.—HUGH M. SMITH, *Washington, D. C.*

The European Widgeon in North Carolina.—I found not long ago in the collection of Mr. Louis Agassiz Shaw (No. 101) of Chestnut Hill, Mass., a male *Mareca penelope* taken by Mr. L. C. Fenno on Currituck Sound, on November 23, 1900. The bird is a fine, well stuffed specimen, and is I think the first to be recorded from the State. It will eventually be presented to the Museum of Comparative Zoölogy.—REGINALD HEBER HOWE, Jr., *Longwood, Mass.*

Northern Phalarope and Black Tern at Cumberland, Md.—On May 23, 1901, a friend brought me, beside Sora Rail, Bartramian Sandpiper and Solitary Sandpiper, a fine male specimen of *Phalaropus lobatus*. He had seen a pair of these birds on a large meadow along the West Virginia bank of the Potomac, and shot one. At this place, called Swamp Ponds, the Potomac makes a rather short bend into Maryland from west to east, so that this locality in West Virginia is surrounded on three sides by Maryland, so that any bird found there must be counted for Maryland as well as West Virginia, for whether birds have come from north or south to these Swamp Ponds, they had to come from Maryland.

On May 30, while with a friend at the same place, we saw a strange bird, large in appearance, majestically sailing in wide circles over the swamp, often over the river into Maryland, but always returning. Sometimes it would interrupt its slow circles by seemingly strange antics. After much waiting it sat down on a post in the swamp. My friend carefully stalked up to it and took it, and it proved to be a female Black Tern (*Hydrochelidon nigra surinamensis*). There was, however, no sign of eggs

to be seen. It had about six large dragon flies in its stomach. This tern and the phalarope are now in my collection. — G. EIFRIG, *Cumberland, Md.*

Second Record of the Purple Gallinule (*Ionornis martinica*) in Illinois.— I am indebted to Mr. Marvin Hughitt, Jr., for information regarding the capture of a specimen which is rare for this State. The bird was killed by Mr. T. G. Winders while snipe shooting near Coal City, Grundy Co., Ill., on April 24, 1900. It is mounted and now in possession of Mr. Hughitt. The only previous record for the State, that I am aware of, was given by Mr. E. W. Nelson in his 'Birds of Northeastern Illinois' (Bull. Essex Inst., VIII, April, 1877, pp. 90-155), based on a specimen taken by Mr. C. N. Holden, Jr., near Chicago. Mr. Holden has recently informed me that this bird was taken by Mr. R. Borchardt of Lake View, a suburb of Chicago. — RUTHVEN DEANE, *Chicago, Ill.*

Cory's Bittern.— Since the publication of 'The Standing of *Ardetta neoxena*,' by Mr. Frank M. Chapman, in 'The Auk,' Vol. XIII (pp. 11-19), nine more specimens, six of which are unrecorded, have been taken at Toronto; and Mr. Ames and myself have recorded the finding of the eggs (Auk, Vol. XVIII, p. 106). I believe Toronto still remains the only Canadian place of record for this very interesting bird, and as seven Toronto birds had been recorded when Mr. Chapman published his paper, I have numbered the records given in the following table from eight onwards:

TORONTO RECORDS OF *Ardetta neoxena*, 1896-1900.

No.	Collection of	Locality.	Sex.	Date.	Collector.
8	W. Rothschild	Toronto	♂ ad.	Aug. 17, 1896	A. Dey
9	J. H. Ames ⁽¹⁾	"	♂ ad.	May 14, 1897	Geo. Pierce
10	Geo. Pierce ⁽¹⁾	"	♀ ad.	June 30, 1897	" "
11	Manly Hardy	"	♂ ad.	June 8, 1898	A. Dey
12	J. H. Fleming ⁽²⁾	"	♀ ad.	June 15, 1898	Geo. Pierce
13	C. K. Rogers	"	♂ im.	Aug. 3, 1898	C. K. Rogers
14	Prov. Mus., Toronto	"	♂ ad.	Aug. 7, 1899	A. Dey
15	" " "	"	♂ im.	Aug. 14, 1899	A. Dey
16	J. H. Fleming ⁽³⁾	"	♂ ad.	Sept. 8, 1899	J. Tymon

Nos. 8 and 11 were sexed by the same man, and as both were for some time in my keeping I was able to compare them with others in my own collection, and saw no reason to doubt that they were adult males. No. 8 belonged to Mr. O. Spanner, and I was able to secure it for the Hon.

¹ Recorded by Mr. Ames in Auk, Vol. XIV, p. 411.

² Recorded by Mr. Ames and myself in Auk, Vol. XVIII, p. 106.

³ Now in coll. of British Museum.

Walter Rothschild, in whose museum it now is, at Tring. No. 11 belonged to Mr. G. F. Dippie, and was sold to Mr. Manly Hardy of Brewer, Maine.

Nos. 14 and 15 were sexed by Mr. J. Maughan; No. 14 is an adult male in remarkably high plumage; the abdominal region and breast are largely black, slightly tinged with chestnut, the left tibia has a few white feathers on the inner side; there is a clearly-marked black line running from the gape almost to the back of the head, on both sides, but not reaching the black of the lower crest-feathers, though it nearly divides the chestnut on the sides of the head.

No. 15 is a young male. It has a number of white feathers on the left tibia, and a small patch on the abdomen; the feathers of the head and the secondary coverts have the downy neossoptiles attached. The bird is in a more advanced stage than the young one belonging to Mr. Ames, taken Aug. 24, 1894. The coloring of the feet was peculiar, and Mr. Maughan assures me he has copied it correctly; the green of the tarsus and toes is curiously mottled and blotched with reddish brown; No. 13 and my young male (taken Aug. 17, 1894), were in this respect colored like mature birds, but both are in a more advanced plumage, and it may prove that the feet and legs of the nestlings are not colored as in the adult.

While in England in the spring of 1896, I found that Dr. Bowdler Sharpe, who was then preparing the manuscript of the *Herodiones* for the 'Catalogue of Birds,' had not seen a specimen of Cory's Bittern, and considered it a color phase of *Ardetta exilis*. I had the adult female No. 1328 (Toronto, May 20, 1893) sent him for examination; this is the bird whose description is given as an adult male on page 233, Vol. XXVI of the 'Catalogue of Birds.' Dr. Sharpe also admitted *Ardetta neoxena* into his list of the Ardeidae printed in the Bulletin of the British Ornithologists' Club, December, 1895.

This bird is the one referred to by Mr. Chapman on page 13 of his paper as having been examined by Mr. Brewster. I eventually sent it in exchange to the museum at Liverpool, where it now is. — J. H. FLEMING, *Toronto, Canada*.

A Killdeer (*Egialitis vocifera*) in the vicinity of Cambridge, Mass.— On the 19th of October, 1901, we identified a Killdeer (*Egialitis vocifera*) in a large ploughed field in Belmont, Massachusetts. Although we had no means of securing the specimen its identification is certain since we flushed it three times at close range, getting good views of the rufous tail-coverts. We also saw clearly the marks on the breast and heard the call-note.

According to Messrs. Howe and Allen's 'Birds of Massachusetts' there are only two previous records in the vicinity of Cambridge, both of which were in September. — HOWARD M. TURNER, RICHARD S. EUSTIS, *Cambridge, Mass.*

American Avocet and American Three-toed Woodpecker at Toronto.—An Avocet (*Recurvirostra americana*) was shot on the eastern sandbar, Toronto, by Mr. C. K. Rogers, September 19, 1901. The bird was noticed feeding among a flock of plovers. It proved to be a male, and is the second Toronto record, the first being of a bird taken about fifteen years ago.

The American Three-toed Woodpecker (*Picoides americanus*) was shot on Wells Hill, Toronto, November 16, 1901. It was seen in the company of another, probably its mate. The bird is a male, and is now in my collection. This is the first recorded specimen from Toronto, and a most unexpected occurrence so far away from the Muskoka District, into which it comes occasionally in the winter from further north, but, unlike *Picoides arcticus*, which has been recorded a number of times from the vicinity of Toronto, it does not seem ever to leave the shelter of the forest, and once suited will stay all winter within a very limited area, in isolated pairs. — J. H. FLEMING, *Toronto, Can.*

Capture of the Mexican Jacana in Florida.—Captain B. F. Hall, of the steamboat 'Naoma No. 3,' showed me the skin of a *Jacana spinosa* (Linn.), killed in October, 1899, on Pelican Bay, Lake Okechobee, Florida. — EDGAR A. MEARN, *Fort Adams, Newport, R. I.*

Note on the Name Colinus.—Dr. Stejneger has recently called my attention to the use of the name *Colinus* by Goldfuss, whose reference has several years' priority over that of Lesson. The proper citation for this genus would appear to be: Goldfuss, Handbuch der Zoologie, II, 1820, 220; the type is '*Perdix mexicana*, Caille de la Louisiana, Pl. Enl. 149,' which is synonymized with *Tetrao virginianus* Linn.—CHAS. W. RICHMOND, *Washington, D. C.*

Aquila chrysaetos.—The date of this combination is given in the A. O. U. 'Check-List' as Dumont, 1816, but I have met with several earlier references, the first being *Aquila chrysaetos* Sprüngli, in Andrea's 'Briefe aus der Schweiz,' 1776, 196. — CHAS. W. RICHMOND, *Washington, D. C.*

Occurrence of the Barn Owl in Canada.—In the Bryant Collection in the Museum of Comparative Zoölogy there is an American Barn Owl (*Strix pratincola*) taken by Mr. Louis Cabot at Long Point, Ontario, in early November, 1899. The specimen (No. 1482) was secured for the collection by Mr. H. B. Bigelow. — REGINALD HEBER HOWE, JR., *Longwood, Mass.*

Strix lapponica.—The Lapp Owl was first described by Thunberg, K. Vet. Akad. nya Handl., XIX, 1798, 184, instead of by Retzius. — CHAS. W. RICHMOND, *Washington, D. C.*

Snowy Owl and Golden Eagle at Plymouth, Michigan.—A Snowy Owl (*Nyctea nyctea*) was shot at Plymouth, Michigan, on December 4, 1901. It was a male bird, and its stomach contained no food.

Recently a Golden Eagle (*Aquila chrysaetos canadensis*) was caught near here—the second one observed at this place. These birds are becoming quite rare in southern Michigan, and a law should be enacted for their protection, and not only for them but for several other species of our hawks and owls. — JAMES B. PURDY, *Plymouth, Mich.*

The Hawk Owl in Massachusetts.—I found lately in the Bryant Collection in the Museum of Comparative Zoölogy two specimens of *Surnia ulula caparoch*. The label on one reads "Massachusetts, December 30, ♂," (No. 1524); on the other, "Massachusetts, ♂," (No. 1525). As no Massachusetts specimen has been recorded as taken on December 30, this bird is evidently unrecorded, and makes the thirteenth record for the State. The other specimen may be one of those already recorded of which we have no other data as to the capture. — REGINALD HEBER HOWE, Jr., *Longwood, Mass.*

The Elf Owl as a California Bird.—So far as I am aware the chief, if not the only, claim *Micropallas whitneyi* has in the literature to the rank of a California bird rests upon the type specimen. The paper (Proc. Calif. Acad. Nat. Sci., Vol. II, p. 118) containing the original description of this specimen is entitled 'New Californian Animals', but the locality given for the specimen is Fort Mojave, which was on the Arizona side of the Colorado River. Positive evidence of the occurrence of this owl in California has recently come to my knowledge in an example (now No. 18298, Calif. Acad. Sci.) obtained April 20, 1898, by Mr. J. A. Kutsche in San Bernardino County, the precise locality being about ten miles from San Bernardino on the old Toll Road, altitude about 2000 feet. — LEVERETT M. LOOMIS, *California Academy of Sciences, San Francisco.*

Unusual Abundance of Lewis's Woodpecker near Tucson, Arizona, in 1884.—During the fall of 1884 Lewis's Woodpecker (*Asyndesmus torquatus*) appeared in large numbers in the Santa Cruz Valley, opposite Tucson, Arizona. Although I have been a resident of the place for about twenty-four years it was the only time I ever saw them in that neighborhood. The following concerning them is from my note-book of that date.

September 28. To-day I saw what appeared to be a large black woodpecker in the pomegranate groves west of town. It was wild and unapproachable. It kept much among the small trees.

September 29. To-day I fortunately secured the black woodpecker I saw yesterday. It proves to be a young female of *A. torquatus*. The cervical collar is entirely wanting. So far as I can remember it is the only one I ever met with in southern Arizona.

September 30. I counted 10 Lewis's Woodpeckers in the pomegranate groves to-day and secured 7 of them. They are surely beautiful birds. Evidently they are young as all but three lack the cervical collar, and in the three the collar, although well defined, is much narrower than those commonly met with in the adult bird. A few white spots are apparent in the necks of two, and two others are marked by a narrow line of dirty looking gray. They were in company with some five or six Sparrow Hawks and appeared to be on the most friendly terms with them. If disturbed they flew together and invariably settled on the same bush or tree. The woodpeckers did not cling to the boles of the trees, but sat on the limbs after the manner common to all perchers. They were mostly feeding on pomegranate fruit. They first cut a hole through the hard skin of the fruit and then extract the pulp, leaving nothing but an empty shell. I saw them repeatedly dart from their perches, generally on some topmost limb, far into the air, apparently catch something and then return to their starting point.

The day was cloudy and the wind blowing hard, but from no particular direction although the clouds were drifting westwardly.

October 4. This afternoon I saw but two Lewis's Woodpeckers. Towards night, however, probably a dozen gathered to a central point where the bushes were more dense.

October 8. The Tanagers and Orioles have finally disappeared. The same may be said of the female Blue Grosbeaks, as I have not seen one for the past week. Lewis's Woodpecker was not in evidence to-day.

October 11. Yesterday it stormed hard. Towards evening it cleared and to-day the weather is fine. I found Lewis's Woodpeckers very abundant. To-day I particularly noted their habits which, as a whole, are very unlike those of the Picidae. In flight they have little or none of that laborious undulating movement so common to its kind, but in action and flight they seem possessed of peculiarities supposed to belong to birds of a totally different family. To-day not less than fifty of them were circling through the air, at an elevation of about 500 feet, with all the ease and grace of the Falconidae. Not a stroke of the wing was apparent. I saw those in the trees leave their perches with the regularity of flycatchers, dart after insects, pause momentarily in the air and then return directly to the spot they had just left. I was under a tree when I saw one so leave and return with a dragon fly in its mouth. It was not more than twenty feet above me and in full view. It appeared to be anxious for others of its family as it repeatedly uttered a peculiar *chee, chee, chee*. That, at least, was the most I could make of it. They are also on the ground much of the time, but unfortunately the weeds are so thick that I cannot see what they do or how they act. When disturbed on the ground they fly to the neighboring trees and sit in rows like so many overgrown blackbirds. To-day, for the first time, I saw one sticking against the shaft of a mulberry tree beneath which I was standing. It was pretty well up towards the top and tapping it very lightly. Several others were sitting on the

limbs of the same tree and although I was not more than twenty feet below them they paid no attention to me. I slapped the tree with my hands, but instead of flying they merely turned their heads sideways, watched me for a few moments and then took no further notice of me. They were thick as blackbirds all over the valley and the Chinese gardeners were shooting them for food.

October 13. I cannot reconcile myself to the amazing flight and fly-catching peculiarities of Lewis's Woodpecker. It is difficult to believe such things possible without having really seen them as it has been my good fortune to do. To-day was but a repetition of what I saw them do two days since. From a tree top they will shoot through the air a hundred feet, at any angle or in any direction, stop short and then return to their starting place without a perceptible beat of the wing. Those high in the air were sailing in great circles. They kept it up indefinitely and had the appearance of being so many miniature crows. When sailing they appear to open their wings to the fullest extent possible. At times, however, there is no mistaking the woodpecker flight. I saw it to-day for the first time, not much, but it was woodpecker all the same. In the trees they sit motionless, leaving them only to dash after some passing insect. Those on the bodies of the trees, of which there were quite a number to-day, would occasionally make a short move up, but not often. Now that the pomegranate crop has been destroyed they have commenced to eat the quinces, of which there are large quantities. On the tops of some of the bushes I noticed that every quince had been eaten into, one side of the fruit being generally eaten away. The weather to-day was cloudy and warm.

October 15. Lewis's Woodpeckers have suddenly left the valley. In a tramp of about three hours I did not see more than a dozen.

October 17. I saw, I think, the same bunch of Lewis's Woodpeckers I did two days ago. They were about the same in number and were in the same locality. They occupied what might be called a 'headquarters' tree from which they refused to be driven. This is the third instance of the kind I have seen.

October 19. The blackbirds have come but the black woodpeckers have gone. I did not see one of these wonderful birds to-day.

October 21. Lewis's Woodpeckers are again here in their old time numbers, but I did not observe anything more than usual in their movements to-day.

October 22. There appears to be no diminution in the number of Lewis's Woodpeckers. Many were flying high, gyrating through the air like crows over a dead carcass. The day was windy and warm.

October 25. Lewis's Woodpeckers are still here in their usual numbers. They are in beautiful plumage. If wounded they are very pugnacious and will bite and claw the hands if opportunity is given. It seems to me that they have an unusually large amount of blood in them.

October 26. Lewis's Woodpeckers are still here, but far less numerous than they were yesterday.

October 28. Lewis's Woodpeckers have become quite scarce. Because of their handsome plumage I hoped to collect a few more, but succeeded in getting but two.

My last notation of them was made November 16, and is as follows: "Lewis's Woodpeckers are entirely gone." Although I find I was in the field ten times between Oct. 28 and Nov. 16 that is the only entry made of them. I cannot say with certainty whence they came or whither they went, but I always thought that they came from the north and went south, still I have nothing to prove it by. I surely found them to be an unusually interesting bird, — HERBERT BROWN, *Yuma, Arizona*.

The Rivoli Hummingbird in Southern California.—A male *Eugenes fulgens* was taken by Mr. J. A. Kusche in the San Geronio Pass, Riverside County, California, July 15, 1899. Mr. Kusche made the bird into a fine skin, which is now No. 17394 of the study series of birds in the California Academy of Sciences. I do not recall any previous instance of the capture of this Hummingbird in California.—LEVERETT M. LOOMIS, *California Academy of Sciences, San Francisco*.

Vestipedes vs. Eriocnemis.—*Eriocnemis* Reichenbach (Avium Syst., 1849, pl. xl), is antedated by *Vestipedes* Lesson (Écho du monde savant, sér. 2, VIII, Oct. 22, 1843, 756). Lesson's name is equivalent to *Eriocnemis* and should be used in place of it.—CHAS. W. RICHMOND, *Washington, D. C.*

Note on 'Delattria henrici.'—This species, named *Ornismya henrica* by Lesson and Delattre in 1839, was first described by Swainson as *Lampornis amethystinus* (Philos. Mag., n. s. I, June, 1827, 442). Although given in a well-known paper, Swainson's name has been entirely ignored—an unfortunate state of affairs, since *L. amethystinus* becomes the type of *Lampornis* through the delayed publication of his 'Zoological Journal' paper (Zool. Journ., III, Dec. 1827, 358). *Lampornis amethystinus* will thus become the proper name of the bird now known as *Delattria henrici*, as well as the type of the genus *Lampornis*. The genus long known as *Lampornis* will probably have to be called *Anthracothonax* Boie.—CHAS. W. RICHMOND, *Washington, D. C.*

Lark Sparrow and Olive-sided Flycatcher in Western Maryland.—According to a long cherished desire on my part and a wish of Mr. F. C. Kirkwood, I went, on July 16 last, to the highest part of Maryland, to Accident, Garrett Co., for ornithological research. The elevation of Accident and contiguous territory is 2600–3000 feet. I had with me Preble's List of Summer Birds of Western Maryland, of which mention was made in the last volume of 'The Auk,' p. 208. I desired to, if possible, extend this list of 100 species. I found very near all the species at

or near this one locality, which Mr. Preble observed in the six or seven different places he visited. Besides these I found some which he did not find, *e. g.*, Pigeon Hawk, Rusty Blackbird, Olive-sided Flycatcher and Lark Sparrow. The Olive-sided Flycatcher (*Contopus borealis*) I found Aug. 19 in the middle of woods, calling or whistling with a clear tone: *Du-ee, du-ee*, just like the name Dewey.

The Lark Sparrow (*Chondestes grammacus*) I found to the number of about 50-75 specimens while riding from Accident to Cove, five miles away. After passing through innumerable Vesper, Grasshopper, Field and Chipping Sparrows, I was suddenly astonished to see the Lark Sparrow, with which I was familiar from a long stay in Indiana. I got off the wagon and tried to get a few. But they were very shy. They flew ahead of me, along the fences, into bushes, and into an occasional tree, and when they got to what seemed to be the end of their domain—about five rods along the road—they flew into the fields, and in a half circle back to where I had started to chase them up. This they did several times, never going beyond that certain limit, and I almost gave up my chase after them, when I succeeded in getting an adult female. This was July 24. Taking in addition to this that there were many males, females and young, there is no doubt in my mind that this colony had bred there when found. Although I went over many miles of road round about Accident, I saw no more Lark Sparrows.—G. EIFRIG, Cumberland, Md.

The Song-Notes of the Alder Flycatcher.—Mr. J. A. Farley, in his very interesting article on 'The Alder Flycatcher (*Empidonax traillii alnorum*) as a Summer Resident of Eastern Massachusetts' (Auk, Oct., 1901, pp. 347-355), says that the characteristic song of the species when heard at a distance of a few feet "is found in reality to consist of but one harsh explosive syllable." This statement is so much at variance with my own experience that I cannot forbear taking exceptions to it as a general statement, though of course it may apply to individuals of the species. First I must admit that my acquaintance with the Alder Flycatcher is not as intimate as Mr. Farley's. I have never been fortunate enough to find a nest, and I have never watched the bird for any considerable length of time. I am not, however, entirely unfamiliar with it, having made its acquaintance nearly seventeen years ago, *viz.*, in July, 1885, and having met with it in every successive summer since then, with a single exception, and in various places in Maine, New Hampshire, Vermont, Massachusetts, and Nova Scotia. In all this time I have never suspected the song to consist of a single syllable, and I have often been quite near the bird when he uttered it. It would, therefore, not be easy to convince me that the *characteristic song* of the species is not composed of two or three syllables, though I am aware that the bird has an emphatic one-syllabled note which is not to be confounded either with the insignificant *pep* or with what is known as the song. Let me quote two passages from my journal bearing on this

point. Under date of June 25, 1895 (Londonderry, Vt.), I find: "In Chapman's new 'Handbook of the Birds of Eastern North America,' Dr. Dwight gives *ēē-zēē-ē-ūp* as the song of *E. traillii* [= *E. t. alnorum*]. Hearing the song at a distance this summer I preferred Mr. Brewster's rendering *kē-wing*, but, getting nearer to-day, I find Dr. Dwight's a pretty exact rendering, though I myself should put it *wēē-zēē-ūp*, the *ūp* very faint." (If it were not superfluous, I should like to compliment Dr. Dwight on the felicity of his descriptions and syllabifications of bird-songs.)

The other passage is dated at Willoughby Lake, Vt., June 18, 1896: "In a swampy place southeast of the house I saw two *Empidonax traillii alnorum*, one of which, perhaps the male, had an emphatic *k'weet* which was new to me." I may add that I was no nearer this bird than I have often been, both before and since, to others uttering the familiar two-syllabled song-note, and the difference between the two notes was so marked that there could have been no confusing them.—FRANCIS H. ALLEN, *West Roxbury, Mass.*

The Correct Name for the Canadian Pine Grosbeak.—*Canadensis* (Brehm, 1831), as the subspecific name for the eastern Pine Grosbeak is long antedated by *Loxia leucura* of Müller (Volls. Natursyst. Suppl. und Register-Band, 1776, 150), whose name, based on Buffon's Pl. Enl. 135, fig. 1, will have to be recognized. This form should properly be called *Pinicola enucleator leucura* (Müller).—CHAS. W. RICHMOND, *Washington, D. C.*

The Labrador Savanna Sparrow.—I have, since describing *Passerculus savanna labradorius*, learned more from various sources of its range, habits, and migrations which seem of interest to present.

The species inhabits Labrador as far north certainly as Port Manvers, and probably further—though the bird is apparently most common on the southern Labrador. It is known as the 'Chipbird,' as are most of the small sparrows in the north, and is mentioned by all, I think, of the writers on the Labrador avifauna. I have examined nearly a hundred or more specimens of *Passerculus s. savanna* from Newfoundland and southward since describing the race, with the result that I find Newfoundland and Cape Breton birds approach most closely the Labrador race in measurements, as would be expected, one bird in particular from Cape Breton measuring, wing 2.87, bill .39 × .24, which slightly overlaps the smallest Labrador bird measured. Two other specimens from Labrador have also been sent me from Bowdoin College, taken on the expedition to Labrador in 1891. Both birds, one a male, and one unsexed, were taken at Chateau Bay on July 14 and are in very worn breeding plumage. The male measures, wing 2.86, tail 1.83, tarsus .83, bill .42 × .25. The other, wing 2.75, tail 1.87, tarsus .80, bill .41 × .24. On the migrations an occasionally very large Savanna Sparrow has been noticed by observers and collectors, which are referable to this form, and I have in my collection

five such birds, two from Massachusetts (♀, Brookline, April 26, 1895, wing 2.88; ♀, April 28, 1894, wing 2.90), evidently late northern migrants; two from Rhode Island, wintering birds (♂, Middletown, Dec. 22, 1900, wing 2.89, ♂, wing 2.86), and one from Florida (♂, Kissimmee, Dec. 5, 1892, wing 2.88).

In the collections there will probably be found many specimens referable to this race, which, though I am adverse to naming slight natural and to be expected differences, are widely different enough to deserve a name, if the present accepted races of *sandwichensis* are to be recognized.—REGINALD HEBER HOWE, JR., *Longwood, Mass.*

The Cardinal in Cambridge, Mass.—On Wednesday, November 27, 1901, I saw and identified a male Cardinal (*Cardinalis cardinalis*) near my house in Cambridge. It had already been seen on the 19th of the month about a quarter of a mile away, and it seems probable that it will winter about Cambridge. It does not seem likely that it is an escaped cage-bird, because males of many species of birds are known to often wander north after the breeding season; also because it very rarely occurs that cage-birds escape or are released, and such infrequent occurrences certainly cannot account for the dozen or more records of the Cardinal in Massachusetts. The fact that most of these records are of males seems to be explained by the tendency of male birds to go north after breeding, and also by their brilliant plumage causing them to be more often noticed than the olive-gray female.

In this connection I should also like to make a correction in my record of the Hooded Warbler (*Wilsonia mitrata*), which appeared in the October number of 'The Auk' (XVIII, p. 397), in which I stated that I knew of no other record of this bird for Massachusetts. On investigating the matter, however, I find that there are four previous records. Therefore the present status of this bird in Massachusetts is as follows: (1) Brookline, one taken June 25, 1879; (2) Taunton, two birds noted May 8, 1888; (3) Provincetown, a male taken June 25, 1888; (4) Framingham, a male taken October 15, 1893; (5) Cambridge, a male noted September 5, 1901. It is also said to have formerly bred about Pittsfield in the western part of the State.—ARTHUR C. COMEY, *Cambridge, Mass.*

The Cardinal Breeding at Sioux City, Iowa.—On October 2, 1901, I wrote to Mr. R. Ridgway, Washington, D. C., as follows: "In this connection permit me to report that three weeks ago last Sunday, I saw an adult male *C. virginianus* [= *Cardinalis cardinalis*] at Riverside, a park where the timber and underbrush is almost in its original state, five miles from this [Sioux] city along the Sioux River. I learned from the superintendent of the park that he had seen within the past two years something like a dozen of these birds, old and young. I have frequently made visits to these almost primitive woods for many years, about thirty, and never before saw anything of them. Last Sunday, however, I observed a 'young-

of-the-year' of this same species showing every indication of a male bird, and he was flying towards that part of the park where the superintendent claims that they have been breeding for two or three years. None have been seen here after the general migration of the birds from this section."

In answer to my letter of Oct. 2, Mr. Ridgway stated that he regretted that the note could not be made use of in his new work. Later I received another letter from him in which he states: "It being now too late to utilize your note concerning the Cardinal, I would suggest that you send it to Dr. Allen for publication in 'The Auk'."

As supplementary to the above note, permit me to state that a gentleman here by the name of Dr. Rich, who is making something of a study of ornithology, reported to me that he had for the first time seen the Cardinal, adult male and female together, some ten days ago within about half a mile of where I saw the birds as above stated. To me this is very interesting, and particularly the information received from so accurate an observer as the superintendent of the park, that these birds had been breeding in the park, and across the Sioux River in Dakota, within the past two years. The superintendent has lived in the park for about twelve years, and it is only during the past two or three years that he has observed them.—D. H. TALBOT, *Sioux City, Iowa.*

Tiaris instead of Euetheia.—According to the strict law of priority *Tiaris* will have to take the place of *Euetheia*. Swainson expected his diagnosis of the genus *Tiaris* (Zool. Journ., III, Dec. 1827, 354), to precede his description of *Tiaris pusillus* (Philos. Mag., n. s., I, June, 1827, 438), but owing to delayed publication of the 'Zoological Journal' article the description of *T. pusillus* was first to appear, and hence constitutes the type of the genus. *Tiaris* will therefore apply to the genus we now know as *Euetheia*, and our species will stand as *Tiaris bicolor* and *Tiaris canora*.—CHAS. W. RICHMOND, *Washington, D. C.*

An Addition to the Avifauna of the United States.—The resident White-eyed Vireo of the Rio Grande Valley, Texas, proves to be the *Vireo noveboracensis micrus* Nelson, described in 'The Auk,' Vol. XVI, No. 1, January, 1899, p. 30, from Victoria, in the State of Tamaulipas, Mexico. Mr. Nelson agrees with me that the resident Texan bird is the Tamaulipan form—*micrus*. Its characters are: "Similar to *V. noveboracensis*, but smaller and duller colored, with a paler wash of yellow on flanks. Wing, 58; tail, 50; culmen, 10; tarsus, 20." Its breeding range, in Texas, extends from Kinney and Uvalde Counties to the Gulf of Mexico. Of thirteen Texan specimens in the United States National Museum series, eight have the wing shorter than that of the type of *micrus*; the remaining five having the wing equal to or longer than in the type of *micrus*. Although some Texan specimens (migrants) are referable to the northern form, all are smaller than the average typical bird of New York.—EDGAR A. MEARNs, *Fort Adams, Newport, R. I.*

The Philadelphia Vireo in Vermont.—On the 19th of September, 1900, I secured a Philadelphia Vireo (*Vireo philadelphia*) at Bread Loaf, Addison Co., Vermont, 1500 feet above the sea. It is an adult male in perfect plumage. In looking over the 'Bulletin' of the Nuttall Club and 'The Auk' I find this is the second record for the State, the first having been taken August 11, 1889, by Mr. F. H. Hitchcock, at Pittsford, about twenty-five miles south of Bread Loaf.—C. B. ISHAM, *New York City*.

The Yellow Vireo in Sinaloa.—The collection of the California Academy of Sciences contains a female example of *Vireo hypochryseus* from Rosario, Sinaloa; it was shot April 21, 1897, by Mr. P. O. Simons. This species, I believe, has not been previously reported north of the Tres Marias Islands.—LEVERETT M. LOOMIS, *California Academy of Sciences, San Francisco*.

Nesting of the Tennessee Warbler in British Columbia.—I have lately come into possession of a nest and four eggs of the Tennessee Warbler (*Helminthophila peregrina*) which, owing to their rarity, seem worthy of a description in 'The Auk.'

This set was taken on June 15, 1901, at Carpenter Mountain, Cariboo, British Columbia, and the female was shot off the nest by Mr. Allan Brooks, who writes me as follows: "You ask for a short account of Tennessee Warbler's nesting. The birds made their first appearance on the 22nd of May, and were common the same day. From that time I heard their song in almost every clump of trees. A great number drew off to the northward but a good many remained. They generally frequented the clumps of aspen trees and Norway pines, where the ground was covered with a thick growth of dry pine grass.

"As I saw no female nor evidence of nesting I gave the birds three weeks and started out to look for their nests on the 15th of June. Luckily I soon found a female off her nest, and after an hour's watching, during which time I suffered torments from the mosquitoes, she at last dropped down to her nest. On walking up she fluttered out, and flew off some distance, returning shortly with two others of the same species, when I put her off and shot her.

"A hundred yards further on I came across another female, probably one of the two that returned with the first one. I took up a good position and waited twenty minutes, when she darted down to the ground and disappeared, I went up and was just going to kill her with my little .38 caliber collecting pistol as she fluttered off, when out of the tail of my eye I saw the nest contained newly hatched young.

"I found another nest the same day by carefully quartering a likely piece of ground, and found several the next week, with young also.

"The nests were always on the ground, sometimes at the foot of a small service berry bush or twig. They were all arched over by the dry pine

grass of the preceding year; this year's growth having just well commenced."

The eggs seem to differ in appearance from any of the same genus that I have seen, and may be thus described: Creamy white, finely speckled all over the surface with reddish brown, and also marked with larger spots of the same color, more heavily at the larger ends. There are also a number of spots of light lilac, which are not conspicuous. They measure .57 X .48; .65 X .46; .59 X .47; .61 X .46.

The nest is small and loosely constructed, being quite flat. It is composed outwardly of a few leaves, a little moss and a good deal of fine grass, lined only with the latter material.

The nest was situated on the ground in and arched over with dry grass, and no bush or twigs were near. The eggs contained small embryos.—J. PARKER NORRIS, JR., *Philadelphia, Pa.*

Connecticut Warbler and Philadelphia Vireo at Shelter Island, N. Y.—On Sept. 12, 1901, I took a specimen of the Connecticut Warbler (*Geothlypis agilis*) and on the 18th another, and on the same day a specimen of the Philadelphia Vireo (*Vireo philadelphia*); the first one taken here in over twenty years' collecting, and a new record, I believe for eastern Long Island. This bird was feeding in a young growth of wild cherry trees in an old overgrown field in company with some Red-eyed and White-eyed Vireos—a sort of family gathering.—W. W. WORTHINGTON, *Shelter Island Heights, N. Y.*

Toxostoma vs. Harporhynchus.—*Toxostoma* was first used by Rafinesque (Amer. Monthly Mag., IV, p. 107) in 1818, for a genus of shells. The name occurs in a mere list of shells as "TOXOSTOMA, N. G. 1 species," and is a pure *nomen nudum*. It remained in this state until Nov., 1831 (Enumeration and Account of Some Remarkable Natural Objects in the Cabinet of Professor Rafinesque in Philadelphia, p. 2), when the species was described. Shortly before this, however (Isis, May, 1831, 528), Wagler used the term for a genus of birds (type: *Toxostoma vetula* Wagler, = *Orpheus curvirostris* Swainson), and there seems to be no valid reason why *Toxostoma* should not replace *Harporhynchus*, the latter given in 1847 by Cabanis, on the supposition that *Toxostoma* was preoccupied. Our Thrashers should stand as follows: *Toxostoma rufa* (Linn.), *Toxostoma longirostris sennetti* (Ridgw.), *Toxostoma curvirostris* (Swains.), *Toxostoma curvirostris palmeri* (Coues), *Toxostoma bendirei* (Coues), *Toxostoma cinereu* (Xantus), *Toxostoma cinerea mearnsi* (Anthony), *Toxostoma rediviva* (Gamb.), *Toxostoma rediviva pasadenensis* (Grinnell), *Toxostoma lecontei* Lawr., *Toxostoma lecontei arenicola* (Anthony), and *Toxostoma crissalis* Henry.—CHAS. W. RICHMOND, *Washington, D. C.*

Hylemathrous vs. Troglodytes for the House Wren.—In 'The Birds of Massachusetts' (p. 92) Mr. G. M. Allen and I used *Hylemathrous* for the

generic name of the House Wren for reasons then in our estimation out of place to explain. In its adoption, however, we followed the accepted methods of scientific nomenclature.

Vieillot was first to separate Wrens from Warblers when he in 1807 (*Hist. Naturelle des Oiseaux*, p. 52) restricted the name *Troglodytes* to the true Wrens, including the European Wren (*Troglodytes parvulus*) as well as our American species *aëdon*, which is the only one he deals with in full, for the reason he was writing only on North American birds. He specified no type, and if he had not stated the inclusion of the European bird the mere fact that he took the specific name of the European species for his generic term would imply that he included it. In 1816 in his 'Analyse' (p. 45) he restricted *Thryothorus*, and made the type *arundinaceus*. Rennie in 1831 (*Montagu's Dict. British Birds*, 2nd. ed., p. 570), considering *Troglodytes*, a word meaning a cave dweller, not applicable for the Wrens called them *Anorthura*. This simple name substitution to suit Rennie's taste of course does not affect the type, and he made no restrictions whatever. We have then next to go to Prince Maximilian (*Beitr. Naturg. Bras.*, III, 1830, p. 742), who suggested *Hylemathrous* for a South American species, *T. furvus*, our House Wren *aëdon*, and also included in his separation *Thryothorus arundinaceus* of Vieillot, which he considered = to *Cistothorus palustris*, and not as now understood, *T. ludoviciana*. This name *Hylemathrous* was also in 1860 accepted and restricted by Cabanis (*Jour. für Ornith.*, VIII, p. 406, 407).

Hylemathrous then being used for the House Wren leaves *Troglodytes* by elimination for the European Wren and our Winter Wren, which is congeneric with the European species.

Prof. Newton in his 'Dictionary' (p. 1051) in discussing this case says: "A few, who ignore not only common sense but also the accepted rules of scientific nomenclature, by a mistaken view of Vieillot's intention in establishing the genus *Troglodytes*, reserve that term for some American species—which can hardly be generically separated from the European form.—and have attempted to fix on the latter the generic term *Anorthura*, which is its strict equivalent, and was proposed by Rennie on grounds that are inadmissible."—REGINALD HEBER HOWE, JR., *Longwood, Mass.*

Nesting of the Great Carolina Wren in Connecticut.—"Come up here to-morrow morning and I will show you a bird's nest such as you never saw before in the State of Connecticut"—such was the tenor of the message which the mail brought me from Chester, Conn., last 15th of July, under the hand of Mr. C. H. Watrous, that stirred my oölogical instincts. I have a list of one hundred species whose nidification has fallen under my observation in Connecticut, and here was an offer to introduce to me No. 101. Of course I went, a passenger of the first morning train on the Valley Road, which left me on the station platform of that enterprising town which lies on the west shore of the Connecticut River, about ten miles from its mouth. It was not in the wild woods, as I expected, but

out in the back yard, not fifteen rods from the house, that I was escorted to an open shed, some dozen feet square, with roof of rough slabs laid double and supported by four corner posts, and with three open sides and one, the east, a rock. It was occupied by a small portable forge and anvil and the usual tools of a smithy, evidently long out of use. The end of one of the slabs of the roof, by the forces of decay, had fallen away from its support several inches, and on the shelf so formed between it and the slab above was the nest I had come to see; chiefly composed of decayed leaves, weed stems, fine rootlets, and rubbish, outwardly, and nearly filling the space, lined with stems of maple seed, horse-hair, and pieces of snake-skin. There was no tenant and neither welcome nor remonstrance greeted our intrusion, and the only bird note the cheery song of a Red-eyed Vireo in the tree that spread its shading arms over our heads. Finding seats we waited quietly and patiently the greeting and salutation anticipated as unwelcome guests intruding upon the family affairs of a stranger. Ten minutes of quiet and a little bird flitted from the thicket near, to a branch some fifteen feet away; for five minutes she remained quiet, motionless as a statue, and watched the invaders of her domain; she then descended to the water pool near, took a drink and began chasing the insects around the pool a few moments; then by short flights and leaps she drew near to her visitors till she reached a perch on a small stone not three feet away from us and watched us and our every motion, first with one eye and then with the other, till some slight motion on our part sent her scurrying into the thicket. It was a fine typical specimen of the Great Carolina Wren (*Thryothorus ludovicianus*), and her nest contained five eggs typical of the species, as found in the usual Carolina haunts. Mr. Watrous tells me that he has observed the birds in that vicinity for several years; that he saw the nest and young reared near the same place in a brush heap last year, and he has heard their inimitable song ringing out every month and every week of the year! The birds were perfectly quiet throughout our interview, no song of transport and no note of displeasure once met our ears. This is the first proof I have ever received that this bird was a permanent resident of Connecticut, and I believe this to be the first record of its nidification in the State.—JOHN N. CLARK, *Saybrook, Conn.*

The Blue-gray Gnatcatcher in New York City.—A Blue-gray Gnatcatcher (*Polioptila caerulea*) was seen in Central Park, New York City, and positively identified, on May 22, 1901.—C. B. ISHAM, *New York City.*

Various Massachusetts Notes of Interest.—*Sterna caspia*.—A young female was shot out of a flock of five on September 6, 1901, by Mr. B. C. Tower at Ipswich. These birds seem to appear on our coast very irregularly, but often in fair numbers.

Lanius ludovicianus migrans.—On September 19, 1901, at Yarmouthport on Cape Cod I observed a single bird of this species, which from its wariness I was unable to secure. In the house where I boarded there was another specimen of the Migrant Shrike, taken near Lowell a number of autumns ago. These two records make the tenth and eleventh for the State.

Hylocichla fuscescens fuliginosa.—In this same house I discovered a specimen of the Newfoundland Thrush, taken also near Lowell, a number of autumns ago. This is the second record for the State.—REGINALD HEBER HOWE, JR., *Longwood, Mass.*

Necessary Generic Changes in Nomenclature.—*Helotarsus* Smith (S. African Quart. Journ., I, No. II, Jan.-Apr., 1830, 110), the commonly accepted generic name for the *Bateleur*, is slightly antedated by *Terathopius*, of Lesson (Traité, livr. i, Feb., 1830), whose name should be used.

Polyboroides Smith (S. Afr. Journ., I, Apr. 1830, 106), is a similar case, and should give way to *Gymnogenys* Lesson (Traité, livr. i, Feb. 1830, 64).

Cyphorhinus Cabanis (Archiv f. Naturgesch. X, i, 1844, 282), for a genus of Wrens, is preoccupied by *Cyphorhina* Lesson (Écho du monde savant, sér. 2, VII, June 15, 1843, 1068—type, *Podargus papuensis* (Q. & G.). *Leucolepia* Reichenbach should supersede *Cyphorhinus*.

Perissornis Oberholser (Proc. Acad. Nat. Sci. Phil., 1899, 216), a new name for *Dilophus* Vieillot, preoccupied, was long ago called *Creatophora* by Lesson (Compl. Œuvres Buffon, ed. Lévêque, XX, 1847, 308), whose name should be accepted for *Gracula carunculata* Gmelin.

Lessonia Swainson (Fauna Boreali-Americana, II, Feb. 1832, 490), should be used in place of *Centrites*, which was proposed by Cabanis (Archiv f. Naturgesch., 1847, I, 256), on the ground that *Lessonia* was preoccupied in botany.

Dendrophila Swainson (Classif. Birds, II, July, 1837, 318), is preoccupied by *Dendrophila* Hodgson (Madras Journ., V, No. 15, April, 1837, 432). *Calisitta* Reichenbach is available for the small group of Nuthatches to which Swainson applied the above name.

Docimastes Gould (Monogr. Trochil., IV, 1849, pl. 233), is antedated by *Ensifera* Lesson (Écho du monde savant, sér. 2, VIII, Oct. 19, 1843, 734). The Sword-billed Hummingbird should therefore be known as *Ensifera ensifera*.

Metallura Gould (P. Z. S., 1847, 94), was earlier named *Laticauda* by Lesson (Écho du monde savant, sér. 2, VIII, Oct. 22, 1843, 758—type, *Trochilus tyrianthinus* Loddiges), whose name should be used.—CHAS. W. RICHMOND, *Washington, D. C.*

Northern Visitants to Oregon.—Mr. B. J. Bretherton has recently sent me some birds from Lincoln County, Oregon, three of which are of particular interest.

Cryptoglaux (= *Nyctala*) *acadica*, ♀, Newport, Oregon, December 14, 1896. This specimen does not appear to belong to the recently described humid Northwest Coast form, *Cryptoglaux acadica scotæa* (Osgood). It seems not distinguishable from examples from Ontario, Connecticut, Minnesota, and California. Perhaps it was a winter visitant from the less humid interior somewhere.

Calcarius lapponicus alascensis, ♂, October 2; ♀, September 14, 1899; both taken at Cape Foulweather, Oregon. As far as I can judge these are exactly like fall specimens from Kotzebue Sound, Alaska.

Spizella monticola ochracea, ♂, Newport, Oregon, April 9, 1901. This specimen is somewhat larger than Kowak River breeding birds; the interscapulars are more narrowly black-streaked, with edgings of buffy white; hind neck and rump also paler. These characters point toward a more arid summer habitat, possibly among the northern Rocky Mountains of British Columbia.—JOSEPH GRINNELL, *Palo Alto, Calif.*

Connecticut Bird Notes.—This spring (1901) Mr. J. B. Canfield of Bridgeport, Conn., reports that three pairs of Rough-winged Swallows (*Stelgidopteryx serripennis*) nested in this vicinity. Judge John N. Clark, of Saybrook, notes another pair in that locality; and while en route on his trip to New Hampshire he noted a pair at White River Junction. Mr. R. Heber Howe, Jr., reports a pair at Gales Ferry. Mr. Calvin Rawson ('J. M. W.') of Norwich, Conn., also reports two pairs of Rough-wings, one nesting under the Laurel Hill bridge, and the other in the new coal pocket.

I wish to record the nesting of three pairs of Rough-winged Swallows, one pair at Millstone Point, a short distance south of New London, first noticed May 12; a pair in Groton, opposite New London, June 10; and a pair still further east in Poquonnoc, also on June 10, about ten miles from the Rhode Island border.

Rough-winged Swallows are evidently extending their breeding range farther and farther eastward, and are more numerous than generally supposed, and the A. O. U. Check-List should include Connecticut as within its breeding range. This is the verdict of Judge John N. Clark of Saybrook, Conn., one of our most careful observers, with long years of experience in ornithological field work.

On May 12, 1901, I was fortunate enough to find a small colony of Fish Crows (*Corvus ossifragus*) nesting on one of the headlands jutting into Long Island Sound, in the vicinity of New London and within sight of the Watch Hill summer hotel, on the Rhode Island border. On further investigation I found 2 nests containing 5 eggs each; 1 nest containing 4 eggs; 1 nest containing 3 eggs; 1 nest containing 4 young (a day or two old).

On Nov. 10, I noted five individuals of the colony and shall observe if they winter so far east of their usual range. Mr. J. B. Canfield of Bridgeport, speaks of a small colony in his vicinity also.

I also wish to record the capture of a Black Vulture at Black Point, East Lyme, on July 6, 1901, by Mr. Robert Payne. The bird was seen to alight in a pig-pen and feed with the pigs. It was secured and is now in my mounted collection of birds. No others were seen.—JAMES H. HILL, *New London, Conn.*

Ontario Bird Notes.—A Dovekie (*Alle alle*) was shot Nov. 18, 1901, by H. Macdonald, a fisherman, two miles out in the lake from Toronto, Ontario. Mr. John Maughn, a taxidermist, now has it in his possession. I was present when he opened the stomach, which was empty except for a few small fish bones. It was a female and evidently a young bird, as there was no white on the secondaries and the back was slaty instead of a black.

A pair of Little Blue Herons (*Ardea carulea*) was taken by J. W. Anderson at Aylmer, Ont., a small inland town about nine miles north of Lake Erie, August 15, 1901. Two more were shot within a few miles of this place some time ago; all four were in the white plumage, with the primaries tipped with slate color.

A Canada Jay (*Perisoreus canadensis*) was also taken by J. W. Anderson, at Aylmer on Nov. 9, 1901.

A specimen of the Pine Grosbeak (*Pinicola enucleator*) was taken at Whitby, Ont., Nov. 18, 1901, from a number that had been in that vicinity for some time, and was sent to me by a friend.—J. H. AMES, *Toronto, Ontario.*

Solution of the 'Ornithological Mystery.'—I was much pleased to read Mr. Brewster's article, 'An Ornithological Mystery,' in the October number of 'The Auk,' as I feel certain I can help to solve it, as I myself had a bird which answers exactly to the description of the Yellow Rail (*Porzana noveboracensis*).

On Sept. 13, 1900, while in Mr. Hope's bird store, Queen St., Toronto, he told me he had a live rail for me, and when I saw it I was delighted to find it was a Yellow Rail, which had been taken by a man on the Humber River (particulars unknown). I had a cage made for him, 2½ by 1½ feet, with a metal bottom, in which I kept sand and about half an inch of water, with some aquatic plants, which I thought would be suitable for my new friend.

The little fellow became very tame, and I let him out occasionally, but he made no attempt at flying. Mr. Brewster speaks of 'the Mystery' as the 'Kicker,' while the female portion of my household christened my bird 'the Scold.' I kept the cage on the kitchen floor and he would invariably scold the first person who went into the room in the morning, and if any of their skirts brushed up against the cage he would be sure to scold them with his familiar call *kik-kik-kik-kik-queah*. If we went into the room at night and lighted the gas and surprised him he would use the longer call, *kik-kik-kik-kik-kik-kik-kik-kik-ki-queah*; and on two occasions, when he was at ease he uttered a note exactly like the Indigo Bunting's *chip*.

I fed him on boiled eggs and prepared mockingbird food, and a few meal worms.

One evening about the last week in December, 1900, while I was watching him bathe, evening being his favorite time for bathing, the poor little fellow's head dropped over the side of the bath, and after a few convulsive twitches he was dead. I had not time to make him into a skin, so sent him to a taxidermist, who unfortunately did not take the sex. — J. H. AMES, *Toronto, Ontario.*

Clark on the Classification of Birds. — Mr. Clark's most able and interesting article on the classification of birds, in 'The Auk' for October (XVIII, pp. 370-381) while showing the great value of pterylography, is one more example of the danger of attempting to base a system of classification on one character. Also it is a warning not to use external characters for the definition of great groups, but rather to rest them on the firmer foundation of characters afforded by the skeleton. This remark is naturally aimed at the combination of Tinamous and fowls to form one of the "old, worn-out 'orders'" complained of by the author at the commencement of his paper.

Mr. Clark assumes that changes of habit are *soon* (italics mine) followed by changes of structure, and although nothing is brought forward to sustain this statement, it may be freely admitted that many features of a bird's skeleton are at least adaptive, as in all other vertebrates, and that one of the stumbling blocks in the path of "the avian taxonomist" is the extent to which morphological structure may be obscured by adaptation. Nevertheless, this modification does not extend to the more important features, and particular objection must be made to the assertion that the skull is specially liable to adaptive changes. For while the external shape may be influenced the fundamental structure of the skull is unchanged, and although a passerine bird, for example, may have the slender bill of a honey creeper or the wide and short beak of a swallow, the skull is built on the same plan. Again, no feature is more characteristic of the Passeres than the structure of the hypotarsus, and while pterylosis may unite "Passeres and Picarians," the upper end of the tarsus shows at a glance whether or not, from Wren to Raven, a bird is a member of the upper 6000 of avian society. That the so-called picarian birds seem to, and do, form a heterogeneous assemblage is believed by many ornithologists to be due to the fact that they represent what may be called Nature's attempts to construct a passerine bird, being so many stages in the line of evolution, on the one hand reaching towards the higher type of birds, on the other retaining traces of their ancestry and of their affinity to other forms, while over all is the mantle of specialization along certain lines.

But if Mr. Clark thinks that modifications of the skeleton are adaptive and due to mechanical causes, what does he think of the main features of the pterylosis? If these be not due to adaptation, then there is no such

thing; this at least is my own view, and no better example could be brought forward to sustain it than that of the Hummingbirds which Mr. Clark cites as examples of the primitive pattern of pterylosis. Some years ago I wrote: "The pterylosis of all birds is more or less adaptive, having some direct relation to their habits, and this adaptation is well shown in hummingbirds. The bare tracts on the nape and along the throat allow the neck to readily lie against the middle of the back, or to bend downward over the point of the breast bone, while the bare spaces under the wing and along the sides of the body permit the wings to be easily closed and applied to the body, the side spaces conforming almost exactly to the curve of the edge of the folded wing. The large bare space on the under side, found in nearly all birds save water fowl, is mainly to allow the warmth of the body to be directly applied to the eggs during incubation, and in birds like ducks and penguins (also auks) which are densely or completely feathered beneath, a bare spot is present during the breeding season." Thus the pterylosis of the hummingbird is primitive because it shows few or no modifications of its purely adaptive features.

It is interesting to note that the pterylosis of the great struthious birds bears out the two theories that these birds are descended from ancestral forms which flew, and that the apteria are due to mechanical causes. For while it is commonly stated that these birds are evenly covered with feathers, yet, according to that careful observer, Mr. Pycraft, they have well-defined, if small, apteria, and these bare places are best defined in *Rhea*, the genus which has the largest wings.

Finally, while hoping that Mr. Clark may continue those careful pterylographical studies which are yielding such good results, and granting the great value of the pterylosis as an *aid* to classification, I must confess that it seems rank heresy to hold that primary, fundamental structural characters are more susceptible to modification than are secondary external characters. — F. A. LUCAS, *Washington, D. C.*

RECENT LITERATURE.

Ridgway's 'Birds of North and Middle America.' Part I.¹—Doubtless no recent work on American birds will receive a more cordial welcome than this 'Part I' of Mr. Ridgway's long projected treatise on the 'Birds of North and Middle America.' Some idea of the amount of labor involved in treating the 3000 species embraced in this wide area can be obtained by an examination of the present volume—the first of a contemplated series of eight—which includes only the single family Fringillidæ, numbering 389 species and subspecies. As stated in the author's preface: "Although preparations for the present work have been more or less actively conducted for some twenty years past, as time and opportunity permitted, the actual work of putting together the vast amount of material accumulated during that period was not begun until September, 1894, when the author was directed by Dr. G. Brown Goode, Assistant Secretary of the Smithsonian Institution, in charge of the National Museum, to consider of paramount importance among his official duties the task of 'making available, through publication, the results of the ornithological work of the Government, as represented in the collections of the Smithsonian Institution.' The labor of collating references pertaining to more than 3000 species of birds, verifying citations of original descriptions, measuring many thousands of specimens, and other time-consuming details connected with the preparation of such a work has necessarily delayed the beginning of its publication; but most of this drudgery having been disposed of, it is hoped that future progress may be more rapid."

As to the scope of the work, the author says: "In the following pages the attempt is made to describe every species and subspecies, or definable form, of bird found on the continent of North America, from the arctic districts to the eastern end of the Isthmus of Panama, together with those of the West Indies and other islands of the Caribbean Sea (except Trinidad and Tobago), and the Galapagos Archipelago; introduced and naturalized species being included, as well as accidental or casual visitors."

"The classification presented," it is stated, "is essentially that of the most recent and advanced authorities, with such minor modifications as

¹ The Birds | of | North and Middle America: | A Descriptive Catalogue | of the | Higher Groups, Genera, Species and Subspecies of Birds | known to occur in North America, from the | Arctic Lands to the Isthmus of Panama, | the West Indies and other Islands | of the Caribbean Sea, and the | Galapagos Archipelago. | By | Robert Ridgway, | Curator, Division of Birds. | — | Part I. | Family Fringillidæ — the Finches. | — | Washington: | Government Printing Office. | 1901 = Bulletin of the United States National Museum. No. 50. — 8vo, pp. i-xxxii, + 11. = errata, + pp. 1-715, pll. i-xx.

in the judgment of the present author seem desirable." Considerable space is given to a statement of the principles which have been adopted as the author's guide in matters of classification, as regards not only the higher groups but also in respect to species and subspecies, which seem in the main both commendable and sound. As regards nomenclatural rules, those of the American Ornithologists' Union "have been strictly adhered to in all respects," but he does not feel bound to adhere to the decisions of its Committee in respect to the status of species and subspecies, or other groups, when his investigations lead to other results, which is of course proper and natural, although, as he admits, such questions are often merely a matter of opinion, and depend upon, among other things, "one's ability to discern differences and estimate the degree of their constancy." That Mr. Ridgway is, *par excellence*, an expert in such matters, no one will question; yet it is possible for even experts to differ as to "the degree of difference which should be recognized in nomenclature."

In respect to the citation of references in making up the synonymies, Mr. Ridgway has taken the trouble to be scrupulously exact, for which he cannot be too highly commended. Apropos of this he says: "The correction of an author's orthographical errors is a pernicious practice, though much in vogue; 'science is not literature,' neither has it any concern with what an author should have done or meant to do, but only with what he actually did."

The material on which Mr. Ridgway's work is based is of course primarily that of the U. S. National Museum, but this has been supplemented by that of all the other principal museums in the United States, so far as it seemed necessary to the work in hand.

Respecting his beginning his work with the Finches, the author says: "The necessity for beginning this work with the highest instead of the lowest forms is to be regretted, and may be explained by briefly stating that owing to inadequate facilities for properly arranging the larger birds in the National Museum collections these are not available for study, and consequently it became necessary either to begin with the smaller birds, already systematically arranged, or else postpone the work indefinitely." This unfortunate condition of the National Museum collection has not only been a hindrance for many years to the curator in his own official work, but a great detriment to other specialists having need to consult this part of the collection, and hence to the progress of science. It is a condition, however, for which neither the curator nor any officers of the Museum are responsible, but is due to a short-sighted and niggardly Congress that for so long a time has turned a deaf ear to the need of a building suitable to properly house and render accessible the scientific material belonging to the National Government.

The author's definition of the term ornithology (p. 1) is followed by an unfortunate classification of the different kinds of ornithology. He says: "There are two essentially different kinds of ornithology: *systema-*

tic or *scientific*, and *popular*. The former deals with the structure and classification of birds, their synonymies and technical descriptions. The latter treats of their habits, songs, nesting, and other facts pertaining to their life-histories. . . . Popular ornithology is the more entertaining, with its savor of wildwood, green fields, the riverside and seashore, bird songs, and the many fascinating things connected with out-of-door Nature. But systematic ornithology, being a component part of biology—the science of life—is the more instructive and therefore more important.” In this hasty generalization an important field of research has not only been disregarded but, by inference at least, ruled out as not only not scientific, but as not falling within the author's definition of biology. This is, in a broad sense, the life-histories, including the relation of the animal to its environment, and the many problems of evolution that depend for their solution upon the study of the living creature.

Mr. Ridgway considers at some length the general subject of the classification of birds, giving diagnoses of the higher groups, with keys to the subclasses, orders, suborders, and families, so far as they come within the scope of his work. The recent classifications of birds are critically examined and compared, and the synonymy of the higher groups, and copious references to authorities, are given in footnotes. Mr. Ridgway's own classification as adopted for his work may be presented as follows:

Class AVES.

Subclasses. Saururæ (= Archæopteryx). Ornithuræ.

Orders of the ORNITHURÆ.

Odontolcæ.	Colymbiformes.	Galliformes.
Odontotormæ.	Procellariiformes.	Gruiformes.
Struthioniformes.	Ciconiiformes.	Charadriiformes.
Rheiformes.	Anseriformes.	Cuculiformes.
Casuariiformes.	Falconiiformes.	Coraciiformes.
Apterygiformes.	Crypturiformes.	Passeriformes.
Sphenisciformes.		

Suborders of PASSERES.

Desmodactyli. Eleutherodactyli.

Superfamilies of the ELEUTHERODACTYLI.

Clamatores (chiefly American),
Pseudoscines (confined to Australia).
Oscines.

Families of OSCINES.

Catamblyrhynchidæ. ¹	Corvidæ.
Fringillidæ.	Paridæ.
Tanagridæ.	Sittidæ.
Icteridæ.	Certhiidæ.
Cærebidæ.	Troglodytidæ.
Mniotiltidæ.	Cinclidæ.
Motacillidæ.	Chamæidæ.
Hirundinidæ.	Sylviidæ.
Vireonidæ.	Turdidæ.
Ampelidæ.	Mimidæ.
Ptiliognatidæ.	Sturnidæ.
Dulidæ.	Ploceidæ.
Laniidæ.	Alaudidæ.

Of the 26 families here given two are represented only by introduced species, namely, the Ploceidæ and Sturnidæ. The position of several groups of doubtful affinities is briefly considered, and reasons given for their present allocation. On comparison with the A. O. U. Check-List, it will be noted that the Nuthatches and the Wren-tits have been separated from the Titmice, each group forming a distinct family. The Thrashers and their allies are separated from the Wrens, forming a family Mimidæ, to which is referred the much classified genus *Poliophtila*, which seems to find a new resting place with each 'revision' of its affinities; and *Phainopepla* is severed from the Ampelidæ and referred to a family Ptiliognatidæ. With most of these changes we are in hearty sympathy.

Coming now to the family Fringillidæ, the subject of the present volume, it is to be noted that several genera heretofore associated with the Tanagridæ, and admittedly of doubtful affinities, are referred to the Fringillidæ, as the finch-like genera *Buarremon*, *Arremon*, *Pitylus* and *Saltator*. In fact, the line between the Tanagridæ and Fringillidæ is still confessedly artificial and arbitrary. Also, Mr. Ridgway admits his inability to satisfactorily separate the family into subfamilies, and his criticism of Mr. Sharpe's 'subfamilies' seems quite justified. He, however, considers it expedient to separate the 69 genera treated in the present volume into 18 groups, as follows:

¹ Consists of the single species *Catamblyrhynchus diademata* Lafr., of the northern Andes (Colombia to Peru), usually placed in the Fringillidæ, but raised to family rank by Mr. Ridgway.

Coccothraustæ.
Loxiæ.
Pyrrhulæ,
Fringillæ.
Calcarieæ.
Calamospizæ.
Spizæ.
Chondestæ,
Ammodrami.

Zonotrichiæ.
Geospizæ.
Haplospizæ.
Sporophilæ.
Cyanospizæ.
Oryzoboreæ.
Guiracæ.
Cardinaleæ.
Pitylæ.

Mr. Ridgway's treatment is entirely technical, consisting, in addition to the definitions of the higher groups and the 'keys,' of a description of the external characters of each species and subspecies, including measurements (in millimeters), and the differences due to age and sex; to which is added a concise statement of the geographical range, but nothing relating to the nests and eggs or the life histories. This descriptive matter is followed by the synonymies and bibliographical citations, which are often very extended and make up by far the greater part of the text. They have evidently been compiled with the utmost care, and embrace all that seem likely to serve any useful purpose. Type localities are specified when known; and likewise the location of type specimens.

The citations have been given with extreme exactness, in order to show just how the names were employed, even to the precise orthography of the writer; and "when the locality to which a citation refers can be ascertained it has been given," with obvious advantages. "Anyone," says the author, "who has had occasion to verify citations must know that the amount of inaccuracy and misrepresentation in current synonymies, even the most authoritative and elaborate, is simply astounding. They abound with names which do not even exist in the works cited, with those which do not correspond with the originals in orthography, and others which have no meaning or use whatever." Such a standard as is here set should prove a reprimand to those guilty of such loose methods and an incentive to accuracy to future workers. But there is one point we note with some surprise, namely, that the author of a manuscript name is given as the authority for the name instead of the author who first published it. In citation due credit is given by citing such names in the following manner, to take an actual case as an illustration, namely: *Leucosticte taphrocotis*, var. *australis* Ridgway (ex Allen MS.) etc., and Ridgway and not Allen should stand as the authority for the name *australis*; and so in all similar cases. Thus the form in question, now properly recognized as a full species, should stand as *Leucosticte australis* (Ridgway)—not *Leucosticte australis* (Allen), as seems to be Mr. Ridgway's rule for this class of cases. This criticism relates of course only to manuscript names on museum labels, or to manuscript names merely, and not to inedited manuscripts published as such by another author.

The number of species treated in the present volume is 221, with 168 additional subspecies, or a total of 389 forms, of which about one half come within the scope of the A. O. U. Check-List, the rest being extralimital. In preparing the present volume the author has had far more material, and given a far greater amount of time to the subject than any of his predecessors, and in justice to him it is but fair to give here his own statement of how the investigation has been conducted: "No doubt many of the forms which the author has recognized as subspecies in the present work may appear trivial to others, especially those who have not had advantage of the material upon which they are based; but in all cases it has been the author's desire to express exactly the facts as they appear to him in the light of the evidence examined, without any regard whatever to preconceived ideas, either of his own or of others, and without consideration of the inconvenience which may result to those who are inclined to resent innovations, forgetful of the fact that knowledge can not be complete until all is known." Yet it is sometimes possible for slight differences to become magnified and their importance over-estimated by long and intense consideration of them — in other words, there is danger of losing one's poise of judgment in dwelling upon minute details, which tend thereby to assume exaggerated importance.

In comparing the present work with the A. O. U. Check-List, so far as they cover the same field, it is to be noticed that in a few instances forms admitted by the A. O. U. Committee have been rejected by Mr. Ridgway, while on the other hand a larger number that have been rejected, or held in abeyance by the Committee, are here recognized. Probably neither can be assumed to be always in the right, and that in some cases the last word has yet to be said.

The volume bears on every page the stamp of patient and conscientious labor and that thoroughness of research which characterizes all its author's work. When the 'Birds of North and Middle America' is completed we shall have for the first time a treatise including the whole North American avifauna down to the Isthmus of Panama, together with that of the West Indies and the Galapagos Archipelago, for which students of ornithology the world over cannot be too grateful. It is to be hoped that strength and health will enable the author to complete the herculean task already so well advanced. — J. A. A.

Scott on the Song of Baltimore Orioles in Captivity.¹— The observations here detailed are of remarkable interest as tending to throw light on the question of how birds acquire their distinctive songs and call notes. It is, indeed, not too much to say that this is one of the most interesting and important series of observations as yet contributed to the subject.

¹ Data on Song in Birds. Observations on the Song of Baltimore Orioles in Captivity. By William E. D. Scott. Science, N. S., Vol. XIV, No. 353, pp. 522-526, Oct. 4, 1901.

They relate to two young Baltimore Orioles (*Icterus galbula*) taken from the nest when about five days old, reared by hand, and kept isolated from all other birds, so that they did not hear any other birds sing, nor any person sing or whistle. When about a month old "they had a single call note very like that of wild birds, but with a slightly different quality difficult to define, more abrupt, musical and much louder. They also had the peculiar rattling chatter associated with orioles. These were all their notes and were uttered rarely." The birds were both females, and were under observation for five years, when they died, apparently of old age.

When nearly eight months old, in February, after a partial spring moult, they began to sing. "The intervals between the singing was sometimes several days, and only a very few minutes in each day were devoted to song. This song was very low and soft, and more or less broken, reminding one of the song of the White-throated Sparrow (*Z. albicollis*) as it is heard during the fall and early spring migrations." The song of both birds "increased in volume and frequency all through the month of March, and during April and the first half of May while daylight lasted, the song was incessant in both birds. It was now a loud clear series of notes of great brilliancy, and poured forth in such rapid succession as to be like that of the House Wren (*T. ædon*) in the intervals, and lasting about as long as the warble of that bird. Except for the 'rattle' which was now and then a part of the repertoire, this song had nothing in it that reminded one of the song of the Baltimore Oriole as heard in New York, Massachusetts or at any other point where the birds occur. Through the second week in May, the song of both birds gradually diminished."

The moult occurred in June, and in early July both were in full plumage. "After the moult there was a secondary song season of short duration. The song was of the same character, but not so prolonged or elaborate." The succeeding years were but repetitions of the first, with slight variations.

Two years later a second brood of orioles was taken, and "were reared in the same way as the others had been, except that they had the *society of, and were closely associated during their earlier lives with*, the two older Orioles." In the following year, the birds of this later brood, one by one, joined in the song of the older birds, "and in a month all were singing a song not to be distinguished from that of the two older birds." They outlived the older birds a year or more "and always sang," says Mr. Scott, "as I believe they had been taught by older birds of their own kind. In short, only six orioles have ever sung this song, for I pursued the experiment no farther, other matters interfering."

Mr. Scott's conclusion is as follows: "My conclusion is that two birds, *isolated from their own kind and from all birds*, but with a strong inherited tendency to sing, originated a novel method of song, and that four birds, *isolated from wild representatives of their own kind, and associated with these two who had invented a new song* learned it from them and never sang in any other way."

This is important testimony, and so far as it goes, seems to favor the presumption that young birds must learn their songs through association with older members of their own species. Yet before this can be assumed as satisfactorily proven, and that the characteristic songs of birds are not innate, further experiments of like nature, and with other species, are desirable. It is a field of great interest and well worthy of careful and persistent investigation. — J. A. A.

Barlow's List of the Land Birds of Placerville, California.¹—The area to which the present paper relates appears to be a narrow belt of country along the old Lake Tahoe stage road, from Placerville to Tallac, 62 miles from Placerville and on the eastern slope of the Sierra. Placerville is situated at an altitude of 1800 feet, the route thence rising for the next 50 miles to Summit, with an altitude of 7000 feet, and thence 12 miles down the eastern slope to Tallac at an altitude of 6200 feet. The first eight pages of this very interesting and important paper contain a general description of the country through which the route passes, with numerous half-tone illustrations from photographs, an account of the 'life zones' of the region, and of the recent explorations on which the paper is based, followed by an extensively annotated list of the land birds, numbering about 130 species.

Placerville is situated at "the lower limit of the Transition zone, which extends up to about 5000 feet"; this is followed by the Canadian zone, extending from 5000 feet up to 7500, with the Hudsonian above, extending "from about 8000 feet upward on the slopes of the higher peaks." Mention is made of the characteristic birds and trees of these several zones.

The list is based on observations made by various observers during the breeding season for the last nine years, notably upon those of Mr. W. W. Price, who "made his first investigations in the summer of 1893 and has since devoted three months of each year to the exploration of the country contiguous to the stage road. His twenty-seven months' experience has made him familiar with even the more remote portions of the region so that the addition of his notes [included in brackets and designated by the initials 'W. W. P.'] to the present list insures its reasonable completeness." Mr. Barlow went over the entire route in 1901, and had previously spent short periods, at various points, in company with other observers, to whom he acknowledges valued assistance. These include Messrs. W. H. Osgood, R. H. Beck, L. E. Taylor, H. W. Carriger, John M. Welch, Wm. L. Anderson, and others. The list thus naturally deals

¹ A List of the Land Birds of Placerville-Lake Tahoe Stage Road. Central Sierra Nevada Mountains, Cal. By Chester Barlow. With Supplementary Notes by W. W. Price. The Condor, Vol. III, No. 6, pp. 151-184, Nov. 16, 1901.

with only the summer birds of the region, leaving unrecorded many of the winter visitants, while "no attempt has been made to list the water birds."

The region here treated is faunally one of great interest, and the information thus brought together adds greatly to our knowledge of the vertical range of a large number of species in the Central Sierra region of California. The paper also includes a large amount of new information respecting the nesting habits of many previously little-known birds, and contains also numerous photographic illustrations of their nests and eggs. — J. A. A.

Pearson's 'Stories of Bird Life.'¹ — Professor Pearson's attractive little book, while intended for general reading, "is especially designed for use in schools as a supplementary reader, beginning with the fourth grade." It consists of twenty chapters or 'stories', written in a popular vein and appropriately illustrated, with two appendices, the first giving descriptions of the 27 birds mentioned more or less prominently in the 'stories', and the second containing 'Suggestions for Bird Study', but there is no index nor list of illustrations. The following selection of titles indicates the scope and general character of the stories: 'The Arredondo Sparrow Hawk,' 'Our Chimney Dwellers,' 'The Childhood of Bib-Neck,' 'Robin Redbreast,' 'An Old Barred Owl,' 'The Birds of Cobb's Island, Virginia,' 'A Pair of Eagles,' 'Bird Key,' 'The Mocking Bird,' 'A Bobwhite Family,' 'The city of the Longlegs,' 'A Quartet of Woodland Drummers,' etc. The author tells us: "These stories are not fanciful, but are true to bird life. The Arredondo Sparrow Hawk, Ruffle-Breast and Socrates were particular birds well known to others as to me. In the case of the Bob-white family, Bib-neck, the Plover, I have combined into the lives of a few birds incidents I have known to occur to many. The accounts of visits to birds' nests, bird colonies and the like are given as they occurred."

Prof. Pearson is an earnest bird lover and a sympathetic and entertaining writer, and his 'stories' tend not only to instruct, but to inspire an intelligent appreciation of the economic value, as well as the æsthetic interest, of birds to man. The book is attractively printed in large type, and merits a hearty welcome to the list of popular bird books. — J. A. A.

Sharpe's 'Hand List of the Genera and Species of Birds,' Volume III.² — Volume III of this great work follows with commendable prompt-

¹ Stories of Bird Life | By | J. Gilbert Pearson | Professor of Biology and Geology in the State Normal and Industrial College, | Greensboro, North Carolina | [Design] With Illustrations by and under the Supervision | of | John L. Ridgway | — | Richmond | B. F. Johnson Publishing Company | 1901—12mo, cloth, pp. 1-236, colored frontispiece, 7 half-tone plates, and numerous illustrations. Price, 60 cents.

² London, 1901, 8vo, pp. i-xii + 1-367.

ness Volumes I and II, considering the magnitude and great labor of the undertaking. Having already noticed at some length the scope and character of the 'Hand List' it is necessary here merely to call attention to the contents of the present volume,¹ which includes Dr. Sharpe's Orders XXXIV, XXXV, and a part of order XXXVI, or the Eurylæmidæ, the Menuridæ, and the Mesomyodian and Acromyodian Passeres. These groups embrace 19 families, represented, in round numbers, by 400 genera and 3000 species, about equally divided between the Old World and New World. The numerically leading families are the Muscicapidæ, with 696 species; the Tyrannidæ, with 562; the Dendrocolaptidæ, with 393; the Formicariidæ, with 348; the Pycnonotidæ, with 245; the Campophagidæ, with 159; the Cotingidæ, with 145; and the Hirundinidæ, with 116. Among the larger genera are *Rhipidura* with 99 species, *Thamnophilus* with 72, *Pitta* with 51, *Synallaxis* with 49, *Grallaria* with 42, *Siptornis* and *Piezorhynchus* each with 41, and *Hirundo* with 40; while as many more genera include from 30 to 40 species each. It should, however, be understood that 'species' in this connection means nameable forms, no nomenclatural distinction being made in the 'Hand List' between species and subspecies.

Dr. Sharpe has brought the subject down to about the end of the year 1900, and in some cases well into 1901, although the date of the preface is July 10, 1901. Note is duly made of the many generic changes pointed out as necessary by Oberholser and Richmond during the last two or three years, and most of them receive Dr. Sharpe's approval. *Formicivora*, however, we are glad to see, holds its place as against *Drymophila*, which latter now replaces *Myrmeciza*.

The American genus *Polioptila*, it may be noted, now finds a resting place in the Old World family Muscicapidæ!

The excellent character of the work, mentioned in our notices of previous volumes, is well sustained, and the same care has been taken to secure revision of the proofsheets by leading authorities, which include seven ornithologists of England, six of the most prominent European ornithologists, and six in America.—J. A. A.

Stark's 'Birds of South Africa.' Vol. II.²—The second volume of 'The Birds of South Africa,' has been prepared by Mr. W. L. Sclater, Director of the South African Museum, from manuscripts left by the late Dr.

¹ For a notice of Vol. I see this Journal, XVII, Jan. 1900, pp. 79-81, and of Vol. II, *ibid.*, XVIII, Jan. 1901, pp. 120, 121.

² The | Birds of South Africa | By | Arthur C. Stark, M. B. | Completed by W. L. Sclater, M. A., F. Z. S. | Director of the South African Museum, Cape Town | Vol. II | with a Portrait, Map and Illustrations | London | R. H. Porter | 7 Princes Street, Cavendish Square, W. | 1901.—8vo, pp. i-xiv + 1-323, frontispiece, 83 text cuts.

Arthur C. Stark, who was killed at Ladysmith just after passing the sheets of the first volume through the press, as stated in our review of Volume I (Auk, XVII, April, 1900, pp. 189, 190). Mr. Sclater states: "The manuscript of this volume was found partly stored at Durban and partly along with the author's papers in Ladysmith, and by the desire of his executors has been entrusted to me for completion and publication. A good deal of revision and addition has been necessary to complete this volume, which I trust may be found as satisfactory as the first, for which Dr. Stark was alone responsible." Mr. Sclater further says: "It is my wish and hope to be able, with the help of Dr. Stark's note-books and papers, to prepare, very shortly, the two final volumes on South African birds necessary to complete this work." This is a very pleasant assurance, as this work, when completed, will form a most useful hand-book of South African ornithology. The two volumes on the Mammals, also by Mr. Sclater, have already been issued, and form a most welcome and valuable contribution to the series of volumes forming 'The Fauna of South Africa,' of which Mr. Sclater is the editor and Mr. R. H. Porter the enterprising publisher.

In scope and method of treatment the present volume compares favorably with the first, already described at some length in this journal (*l. c.*); the numerous illustrations, prepared especially for this work by Mr. H. Grönvold, are satisfactory and well chosen.

The present volume covers the Passerine families Laniidæ, Crateropodidæ, Turdidæ, Muscicapidæ, Dicruridæ, Campophagidæ, Hirundinidæ, and Pittidæ, and treats of 199 species — Nos. 183-381. In addition to the text cuts illustrating structural details are several half-tone illustrations of birds with their nests.

The nomenclature is conservative, and not quite up to date, if we take Dr. Sharpe's 'Hand List of Genera and Species' as the standard, it conforming more nearly with that of the British Museum 'Catalogue of Birds.' — J. A. A.

Nelson on New Birds from Mexico.¹ — The new species and subspecies here described were mostly collected by Mr. Nelson and Mr. Goldman during their recent trip to Yucatan, and are as follows: (1) *Crypturus sallei goldmani*, (2) *Crax chapmani*, (3) *Nyctidromus albicollis yucatanensis*, (4) *Attila mexicanus*, (5) *Myiopagis yucatanensis*, (6) *Pachyrhamphus major itzensis*, (7) *Icterus cucullatus duplexus*, (8) *Icterus cucullatus cozumelæ*, (9) *Stelgidopteryx ridgwayi*, (10) *Troglodytes peninsularis*, (11) *Merula plebeia differens*. A new genus, *Nyctagreus*, is proposed, with *Caprimulgus yucatanensis* Hartert as the type. — J. A. A.

¹ Descriptions of a new Genus and eleven new Species and Subspecies of Birds from Mexico. By E. W. Nelson. Proc. Biol. Soc. Washington, Vol. XIV, pp. 169-175. Sept. 25, 1901.

Robinson and Richmond on Birds from La Guaira, Venezuela.¹—This annotated list of 83 species is based on collections made by Captain Robinson in 1895 and 1900. The "identifications, descriptions of new species, and critical notes" are by Dr. Richmond and the field notes by Captain Robinson. One species, *Microcerculus pectoralis*, is described as new, and there are a few corrections of nomenclature. The proper generic name of *Falco uncinatus* Temm. (= *Regerhinus uncinatus* auct.) is given as *Chondrohierax* Lesson, 1843.—J. A. A.

Embodys 'Birds of Madison County, New York.'²—This list was presented as a thesis for the degree of Master of Science at Colgate University, and forms a brochure of 36 pages. It "is not supposed to be complete," being based mostly on the observations of the writer during the period 1895-1901, and includes for the most part only species actually taken by him, "whose object has been to put forth an accurate list rather than one great in numbers." The list proper, judiciously annotated, numbers 191 species, with a supplementary 'Hypothetical List' of 16 species. The paper is a welcome contribution to faunal literature.—J. A. A.

Osgood's Contributions to the Natural History of the Queen Charlotte Islands and the Cook Inlet Region of Alaska.³—During the field season of 1901 Mr. Osgood, with Mr. Edmund Heller as assistant, was sent to explore the Queen Charlotte Islands, British Columbia, and the Cook Inlet Region of Alaska, in the interest of the Biological Survey. A little over a month, June 13 to July 18, was devoted to the Queen Charlotte Islands, the three largest of the group, Graham, Moresby, and Prevost being visited. The weather proved very unfavorable, yet the results of the trip greatly increase our knowledge of these previously little known islands. A brief account is given of their discovery and previous slight exploration, of their physiography, flora, fauna, and life zones, and a bibliography of previous references of their natural history. An extensively annotated

¹ An Annotated List of Birds collected in the vicinity of La Guaira, Venezuela. By Wirt Robinson, Captain. U. S. Army, and Charles W. Richmond, Assistant Curator of Birds, [U. S. National Museum]. Proc. U. S. Nat. Mus., Vol. XXIV, No. 1247, pp. 163-178, 1901.

² Birds of Madison County, New York. By George Charles Embodys, B. S. Bull. Depart. Geol. and Nat. Hist., Colgate University. 8vo, pp. 36, Hamilton, N. Y., 1901.

³ Natural History of the Queen Charlotte Islands, British Columbia. Natural History of the Cook Inlet Region, Alaska. By Wilfred H. Osgood, Assistant, Biological Survey. Prepared under the direction of Dr. C. Hart Merriam, Chief of Division of Biological Survey. North American Fauna, No. 21, Sept. 26, 1901. Pp. 87, map, and 5 half-tone pll.

list of the mammals, with descriptions of several new species, follows, succeeded by a briefly annotated list of 98 species of birds (pp. 38-50). About one third of these are given on the authority of Rev. J. H. Keen, an observant missionary long resident at Massett, Graham Island, and other authorities, while about one sixth are recorded as 'seen' or 'heard,' and in too many instances for a creditable hard-and-fast list, as "supposed" or "thought to be" this or that species. Of course, in so short a time, large collections could not be made, and it would seem better to be content with a smaller list based on positive information than to increase it at the cost of many weak or uncertain records, however great the probabilities in their favor. Yet much valuable ornithological material was obtained, on which are based several new forms, here for the first time described, namely: (1) *Nyctala acadica scotæ*, (2) *Dryobates picoides*, (3) *Cyanocitta stelleri carlottæ*; to which should be added (4) *Sphyrapicus ruber flaviventris* (Vieillot), by which name Mr. Osgood proposes to recognize the northern Red-breasted Sapsucker of Vancouver Island and the mainland of British Columbia.

The Cook Inlet country was reached August 21, and work was carried on till September 28. This was "the only general district of consequence on the Pacific coast of Alaska that had not been recently visited by naturalists," and the results obtained there by Messrs. Osgood and Heller are therefore of unusual importance. The region is treated in this paper after the same general plan as the Queen Charlotte Islands, namely, a statement is given of the itinerary, an account of the physiography, flora, and fauna, including an annotated list of the trees and woody plants, as well as of the mammals and birds. The annotated list of birds (pp. 72-81) numbers 78 species, of which about 30 are based on specimens in the U. S. National Museum taken by Ferdinand Bischoff at Fort Kanai in 1869, or by Bean, Townsend and Evermann during brief visits to Cook Inlet in the Fish Commission steamer 'Fish-hawk.' As no account of the Bischoff Collection, aside from casual references to individual specimens, has been published, Mr. Osgood's record of this material is a most welcome addition to his list, which contains much valuable information based on his own observations.

Respecting the Cook Inlet region in general, Mr. Osgood states that "the plant and animal life of Cook Inlet is very closely similar to that of the Yukon Valley, or in more general terms, to that of the interior of Alaska. This condition is the more noteworthy, since the fauna and the flora of the same coast south of Cook Inlet are in marked contrast to those of the interior in the same latitude. Since coast influences are usually conducive to life that is relatively more boreal than that of the interior, large faunal regions of the interior seldom extend to the actual coast, except with considerable modification."

The half-tone plates contain eight views of the characteristic vegetation and scenery of the two regions visited, and six figures illustrate the skulls of new species of mammals described from the Queen Charlotte Islands.

The paper as a whole is a most important contribution to our knowledge of the natural history of two previously very little known areas. —J. A. A.

Verrill's 'The Story of the Cahow.'¹—When the Bermudas were first visited by Europeans, about three hundred years ago (1593 and later), they were without human inhabitants, but were the resort of immense numbers of seabirds, notably of Terns and Shearwaters, doubtless several species of each, and, among other birds, by the 'Cahow,' of which we have only the imperfect accounts left us by the first visitors to these islands. These, quoted at length by Professor Verrill, fail to give us a very satisfactory description of the bird, but sufficient to show that it could not be any species known to science. It was a migratory bird, which came to the islands in October in great abundance, and left in June, depositing its single large white egg in a burrow in the sand, in December and January. Its flesh was described as excellent, "and for that reason it was captured at night in large numbers, while its eggs were constantly gathered for food." From these facts Professor Verrill argues that it could not have been a shearwater, with which some writers have identified it, as these birds do not breed till March or April, even in the West Indies, and their flesh is oily and nauseating, and their eggs musky and inedible. Nor could it be any species of gull or tern, which also breed late and lay spotted eggs. It is described as of the size of a pigeon, with a strong hooked bill, a russet brown back, white belly, and russet and white wing-quills. Concerning its affinities Verrill says: "There is no known living bird that agrees with it in these several characters. Most certainly it could not have been a shearwater, nor any member of the petrel family, all of which have such a disagreeable flavor that neither their flesh nor their eggs are edible. It seems to me far more probable that it was allied to the auks (*Alcidæ*), many of which burrow in the ground and lay white, edible eggs. The northern auks have also edible flesh and often a strong hooked bill. But no existing species breeds so far south, nor do they breed in winter. The Cahow may have spent the summer in the southern hemisphere, but possibly it was an arctic bird that produced a southern brood in winter. Or it may possibly have been a localized pelagic species, coming to the land only for breeding purposes."

So many of the birds and their eggs were gathered for food that as early as 1616 they had declined so greatly in numbers that a law was passed, "but overlate," "against the spoyle and havock of the cahowes, and other birds, which were almost all of them killed and scared away very improvidently by fire, diggeinge, stoneinge, and all kinds of murderinges." Doubtless the cahows were not long after wholly exterminated.

¹The Story of the Cahow. The Mysterious Extinct Bird of the Bermudas. By Professor A. E. Verrill, Yale University. Popular Science Monthly, Vol. LX, Nov., 1901, pp. 22-30.

Professor Verrill has located, from these early narratives, some of the breeding places — on some of the smaller outlying islands of the group, — but lack of time prevented any very thorough search for their bones, which he thinks may be found on Castle Island, Southampton Island, and Cooper Island, the latter being in his opinion the most favorable site for such discovery. Here then is another 'ornithological mystery' worthy of further investigation. — J. A. A.

Palmer and Old's 'Digest of Game Laws for 1901.'¹ — This important 'bulletin' presents in convenient form the provisions of the Federal, State and Provincial laws now in force for the protection of game and birds, including the amendments enacted by the various legislatures in 1901. It consists, first (pp. 11-68) of a 'general discussion of game laws,' including restrictions as to time, methods, and purposes of killing game, and the manner of its shipment; and, second (pp. 69-148), abstracts of the laws, with special reference to the shipment and sale of game. "The opening year of the new century has witnessed an unprecedented interest in game protection. Nearly four-fifths of the States and Territories have enacted some amendments to their game laws.... Changes in dates for opening or closing the seasons have been very general, but restrictions on methods of capture, on sale, shipment and storage, have also been numerous. In many instances the laws have necessarily become more complex, but there has been a strong tendency toward extending protection to more kinds of game, shortening seasons, limiting bags, and throwing greater restrictions about the trade in game." It is therefore of the highest importance to have for handy reference a practically complete digest of all the laws relating to the capture, shipment, and sale of game, in the interest not only of sportsmen, but of the increasing number of persons who take an interest in game protection. The importance of the subject is rapidly becoming more and more recognized by the general public, which in itself gives great encouragement to the promoters of intelligent protection for both game and non-game birds. — J. A. A.

Judd's 'The Relation of Sparrows to Agriculture.'² — The results are here given of a very detailed and thoroughly scientific investigation of the food habits of the native sparrows of eastern North America, with

¹ Digest of Game Laws for 1901. By T. S. Palmer and H. W. Olds, Assistants, Biological Survey. Prepared under the direction of Dr. C. Hart Merriam, Chief of Biological Survey. Bull. No. 16, U. S. Depart. Agric., Division of Biological Survey, 1901. Pp. 152, and 8 maps and diagrams.

² The Relation of Sparrows to Agriculture. By Sylvester D. Judd, Ph. D., Assistant, Biological Survey. Prepared under the direction of Dr. C. Hart Merriam, Chief of Biological Survey. Bull. No. 15, U. S. Dept. Agric., Division of Biological Survey, 1901. 8vo, pp. 98, pll. 4, and 19 text figures.

the verdict strongly in favor of the sparrows as an important natural check upon the growth of noxious weeds. Says Dr. Judd: "When the food of the native sparrows is divided into the three classes . . . the neutral part proves to be small, not exceeding a third of all that is eaten; the injurious part very small; and the beneficial part much larger than that of most birds, and from five to ten times as great as the injurious part. We may therefore safely conclude that, as a class, these small birds are well worthy of our protection." The greater part of the first fifty pages of this important and very interesting paper are devoted to an account of the author's methods of investigation, and the general subject of the food of sparrows and its effect on agriculture, while some forty pages treat of the food of the species individually. Several pages are given to the European House Sparrow, with the conclusion that there is little to be said in its favor. "Its insectivorous habits are creditable, as far as they go, but they are insignificant, because the diet is almost exclusively vegetable; and while it is in the vegetable fare that the value of most sparrows consists, yet in the case of the English Sparrow the damage to grain far overbalances the benefit of weed-seed destruction. Adding to this the injury it causes to buildings and statues in cities, there is no escape from the conclusion that the bird is a serious pest the extermination of which would be an unmixed blessing."

It is to be hoped that Dr. Judd's convincing report on the economic value of our native sparrows will have a wide distribution.—J. A. A.

Bonhote's 'On the Evolution of Pattern in Feathers.'¹—Mr. Bonhote's paper is highly speculative and not easy to comprehend, nor does he himself appear to be very clear as to just what points he believes he has even tentatively established. Toward the close of the paper he says: "My object has rather been to show that all the many and diverse markings on the feathers of birds are in the main variations of one type, namely: a longitudinal stripe with great tendency towards lateral expansions into transverse stripes, and that on modifications of this, by suppressing one portion or increasing another, all the various patterns have been built up. . . . The main question that now remains to be answered is that relating to the method in which the pigment groups itself to form these markings, but that is a matter which I hope to be able to investigate when dealing with the question of colour-change. . . . To sum up . . . it should be noted that the most exposed portions of a bird, generally the upper parts, undergo a further evolution than those less conspicuously situated, and if there be any difference between the sexes, the male shows the higher form."

He takes, primarily, in illustrating his theme, the European Sparrow Hawk (*Accipiter nisus*), his plate (pl. xix) giving "diagrammatic" but

¹ On the Evolution of Pattern in feathers. By J. L. Bonhote, M. A., F. Z. S. Proc. Zool. Soc. London, 1901, pp. 316-326, pll. xix, xx.

"accurate representations of actual feathers" from this bird, taken, however, in each case, he says, "from different birds, and that I have no proof of the pattern on any individual feather being changed as some writers (cf. R. B. Sharpe, P. Z. S. 1873, p. 44) have suggested: it may be so, or it may not, but that contingency has not been taken into account in this paper."

He sets out with the hypothesis that "the most primitive feathers were entirely colourless, or of a dull dingy grey, the first trace of a pattern being a longitudinal stripe of colour down the rachis. Possibly the feathers of some species become self-coloured without undergoing any pattern stage, but this is doubtful; and in the majority of self-coloured birds, even when white, the self-colouration has been subsequently assumed. The self-coloured feathers are those in which it is most difficult to fix the period of evolution. . . ." There is much more in this line, but Mr. Bonhote fails to tell us how we are to distinguish 'self-coloured feathers,' or in what the process of 'self-colouring' consists, whereby, apparently, a striped or barred feather may become white, or of some uniform dark shade. Evidently he still believes in the increase, or decrease, or entire rearrangement of pigment within the grown feather; but even from this point of view we fail to see how he has thrown any real light on the evolution of the pattern of feathers.

The facts in the case are: in birds which undergo a series of changes in color, in passing from first to mature plumage, there is often, or usually, a color pattern in the young bird very different from that of the adult, with sometimes intermediate stages different from either. If the *same feathers* were worn throughout these changes there would be some basis for a theory of "evolution of pattern in feathers"; or rather, there would be no need of any theory at all, for the evolution would be a matter of simple and easy observation. As a matter of fact, however, such an evolution of pattern is impossible; the juvenal plumage of a bird, with its particular pattern of markings, is one thing; the postjuvenal, with a different pattern is another; and so on with subsequent plumages till the mature pattern is reached. Each moult may give a different pattern from that of the plumage which preceded it. How then can we say that a barred type of feather, or a whole-colored feather is 'evolved' from a longitudinally striped one, with any regard to the strict meaning of the term?

On the other hand, in certain birds of varied plumage, it is possible to select feathers from different parts of the body of the same individual which will show not only wholly distinct patterns, but also every intermediate stage connecting the two, feathers of a certain type or pattern always being characteristic of a certain part of the pterylosis and other types or patterns of other parts of the pterylosis. Furthermore, these different types or patterns are not successional but are all developed at the same time, each in its respective position in the pterylosis. Yet, in certain instances, a series may be plucked from different parts of the same bird, some of which will have simply a narrow stripe along the

rachis, others in which the stripe is much broader, perhaps with a tendency to break into bars, then others distinctly barred, with still other stages between these and wholly colored feathers. It is rare of course to find such a variety of intergrading patterns in a single bird, but a strong approach to such a condition is by no means rare. So long as these different patterns cannot be demonstrated to be *successional stages in the same feather*, it seems idle to consider them in any strict sense evolutionary stages, or to refer to them as illustrating the evolution of color pattern, evolution implying the evolving of one thing by direct outgrowth from another; and in like manner the term 'self-coloured' in such a connection is clearly inadmissible and misleading. In other words the implied genetic connection does not exist; the relation is simply incidental.

Feathers are classified as striped, barred, etc., in accordance with their pattern of marking, and the markings themselves are indicated by a variety of descriptive terms; and, as almost every conceivable style is represented, there is necessarily a gradation of one form into another, so that all may be considered arbitrarily or theoretically as modifications of the simplest type of all, the longitudinally streaked feather, which seems to be the main conclusion of Mr. Bonhote's paper.

That evolution has played a prominent part in the development of the different styles of coloration that characterize particular groups of birds is beyond question, adapting them to their varied environments and different modes of life, but we do not see how Mr. Bonhote's paper bears especially upon this phase of the question; nor, in fact does he appear to claim that it has such bearing. — J. A. A.

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CORRESPONDENCE.

A Biographical and Autobiographical Letter.

EDITORS OF 'THE AUK':—

Dear Sirs:—The following letter, by Colonel Bernard J. D. Irwin, Surgeon, U. S. Army (retired), throws so much light upon the least-known period of the lives of two of America's distinguished naturalists that I take pleasure in presenting it to the readers of 'The Auk.'

EDGAR A. MEARNS.

COBOURG, CANADA.

Sept. 21, 1901.

Dear Major Mearns:—

In response to your request it affords me pleasure to answer your queries in regard to the late Major Charles E. Bendire, U. S. A. Yes, your assumption is correct, it was I who initiated in him the taste for natural

history which he cultivated with so much zeal and advantage as a naturalist.

Fort Buchanan, Arizona, was situated at the Hot or Monkey Springs, the head waters of the Senorita Creek, a branch of the Santa Cruz, about eight miles from the international boundary and ten miles from the Mexican town of Santa Cruz. I was stationed there from December, 1857, until July, 1861. When our troops withdrew from the Territory in the latter year, that post was abandoned, but when the volunteer troops from California resumed possession of that region the station was re-established at and thereafter known as 'Camp Crittenden.'

In those days we had no hospital corps, hospital attendants — stewards, nurses, cooks and orderlies — were detailed from the line at the request of the medical officers. While on duty there I had the late Hospital Steward Louis Othon Faringhy detailed as acting steward, taught him the routine duties of the position, and he served with me off and on during many years at West Point, Fort Riley, &c. I found him the best and most reliable non-commissioned soldier and man that I ever met. As he belonged to 'D' troop, 1st Dragoons — Bendire's company — I believe it was at his suggestion or through the First Sergeant of the troop — R. F. Bernard, now Brevet Brigadier-General U. S. Army, retired — that I had Private Charles Bendire detailed as hospital attendant, sometime in 1858. He was then comparatively young, an active efficient soldier, quiet and of modest, retiring disposition. At that time I was collecting specimens of Natural History and seeing my work he would from time to time bring me specimens of one kind or another which he supposed desirable for my collection.

His troop having been ordered to California my impression is that he accompanied it to that State and was stationed at Fort Tejon, in the San Bernardino Valley, where he commenced collecting birds' nests and birds' eggs.

In 1864 he called to see me at Memphis, Tennessee, having been commissioned a lieutenant in the regular army after having served as non-commissioned officer — including hospital steward — some years after his service under me. The collection of reptiles mentioned in your letter, was made by me for the Smithsonian Institute at Fort Buchanan and vicinity in 1858-60. I was in frequent correspondence with Professor Spencer F. Baird and through him and Professor Joseph Henry I presented the 'Irwin Meteorite' to the institution. Bendire was not with me in the affair at Apache Pass in 1861. As this is written from memory I regret that I cannot give details in satisfactory form, but trust the résumé may aid you in the proposed paper.

With kind regards believe me,

Yours very truly,

B. J. D. IRWIN.

NOTES AND NEWS.

DR. JOHN ANDERSON, a Corresponding Member of the American Ornithologists' Union, died at Buxton, England, August 15, 1900, at the age of 66 years. He was born in Edinburgh in 1833, and was graduated a Doctor of Medicine from the Edinburgh University in 1861. In 1864 he went to India, and the following year was made Superintendent of the Calcutta Museum. A few years later he was also appointed to the Chair of Comparative Anatomy in the Medical College of that city, and Calcutta became his principal headquarters during his long residence in India. He made, however, several important scientific expeditions to remote parts of India, the results being published in part in 'Zoölogical Results of the Two Expeditions to Western Yunnan' (2 vols., 4to, 1878).

"In 1887, after twenty-three years' service under the Indian Government, Dr. Anderson returned home, and settled in South Kensington, where he devoted himself entirely to zoölogical work, and was a well-known attendant at the Royal, Geographical, Linnean, and Zoölogical Societies. Of the last named — he was for many years one of the Vice-Presidents. Being in delicate health, Dr. Anderson usually passed his winters in Egypt, and devoted his energies mainly to the exploration of the fauna of that country. In 1898, he published a splendid volume on its Herpetology, and up to the time of his death was busily engaged on a corresponding work on Egyptian Mammals. . . . Besides the works above mentioned, he published in 1876, an excellent essay on the osteology and pterylosis of the Spoon-billed Sandpiper (*Eurynorhynchus pygmaeus*)." (*Ibis*, Jan. 1901, p. 160.)

THE ABBÉ ARMAND DAVID, a Corresponding Member of the American Ornithologists' Union, died in Paris November 10, 1900, at the age of 74 years. Born at Espalette in the Province of the Basses Pyrénées in 1826, and educated for the priesthood, in 1862 he was placed in charge of the Lazarist missionary school in Pekin, China. Shortly after his arrival he began transmitting valuable natural history collections to the Paris Museum, and later made a number of successful expeditions into the interior of China, under the patronage of the authorities of the Paris Museum. His last expedition was made in 1872, to Shansi and the Hoang-ho, which, with previous exposure and hardships, so impaired his health that he was obliged to return to France, and where, with partially restored health, he passed his remaining years. From 1870 to 1875 he published a number of important papers on the birds of China, based on his collections and field work. In 1877, in collaboration with M. E. Oustalet, he published his 'Les Oiseaux de la Chine,' the text and atlas making two octavo volumes, and forming a work of great value. Although primarily an ornithologist, he made important collections in other departments of zoölogy,

and also in botany, and these collections elaborated by various authorities, added greatly to the world's knowledge of the natural history of the interior of China.

WE LEARN with great regret of the death of Mr. Lionel William Wigglesworth at Suva, Fiji, on June 7, 1901. Mr. Wigglesworth was well-known as the author of the 'Aves Polynesiæ' (1891), and as joint author, with Dr. A. B. Meyer, of 'The Birds of Celebes' (see this journal, XVIII, pp. 399-401). He left England in November, 1900, via Australia and New Zealand, for a long tour of ornithological exploration among the lesser known islands of Polynesia, for which work he had ample preparation, and to which he had long eagerly looked forward. Mr. Wigglesworth, we learn from 'The Ibis' (Oct. 1901, p. 751), was born Feb. 13, 1865, in the county of Buckingham, England, the second son of the late Rev. James L. Wigglesworth, curate of Hanslope-with-Castlethorpe. After being educated at Trinity School, Old Stratford, his ardent interest in birds led him to take up seriously their study, and in 1889 he went to Braunschweig, Germany, and for two years was a pupil of Professor Wilhelm Blasius; he then proceeded to Dresden and became a volunteer assistant at the Dresden Museum under Dr. Meyer. He died of dysentery soon after his arrival at the Fijis. His sad death is a serious loss to science, as well as to his many friends.

THE FIRST Honorary Degree of Doctor of Science given by the University of Oxford was conferred in June last upon Dr. P. L. Sclater, the senior editor of 'The Ibis,' and is a well-merited recognition of his eminent services to science, and especially to ornithology.

MESSRS. HOUGHTON, MIFFLIN & Co. announce their intention of soon publishing a facsimile edition, in four volumes, large crown octavo, of 'Audubon's Birds of America' (1840-44), provided sufficient interest is shown in the project by ornithologists and others. This proposed Library Edition will contain Audubon's complete text reproduced by photographic process, which will secure, of course, absolute fidelity to the original. The original pagination will be preserved, so that the volumes will be in all respects as available for reference as the rare and expensive seven-volume edition of 1840-44. The plates will not be reproduced, since the attendant expense would defeat the purpose of editor and publishers to bring Audubon's text within the reach of all ornithologists and bird students.

The first volume will contain a portrait of Audubon and a sketch of his life by his grand-daughter, Miss Maria R. Audubon. The editor's notes, which will be printed at the end of each volume, will give the present nomenclature and the general range of each species as now known, besides studying the probabilities in the case of the few problematic species described by Audubon, and performing other similar

editorial functions, but no attempt will be made to fill gaps in the life histories or in any general sense to bring Audubon up to date. At the end of the fourth volume there will be a complete bibliography of Audubon's works.

The work will contain over twenty-two hundred pages. The volumes will be tastefully bound in cloth, and the price to persons subscribing before publication will be \$8.00, net, for the set of four volumes. The publication price will be \$10.00, net.

THE INITIAL number (Vol. I, No. 1) of 'The Emu, Official Organ of the Australasian Ornithologists' Union,' bears date October, 1901. Its first article is an account of 'The Australasian Ornithologists' Union,' giving a history of its origin, discussing the work before it, and the name of its journal, 'The Emu,' giving reasons for the orthography adopted, as against 'Emeu,' etc. The first number, of 32 pages, contains a variety of short papers and notes, reviews, and extracts from other magazines relating to Australasian ornithology. The 'Aust. O. U.' has plenty of work and a free field before it, and is not lacking in vigorous workers in its ranks. It recognizes in Bird Protection a great task, and it is planning aggressive and prompt action. The office-bearers are: President, Colonel W. V. Legge; Vice-Presidents, C. W. De Vis and A. Zeitz; Hon. Treasurer, Robert Hall; Hon. Secretary, D. LeSouëf; Hon. Editors of 'The Emu,' A. J. Campbell and H. Kendall.

THE EXECUTIVE COMMITTEE of the Yorkshire Naturalists' Union invites subscriptions for the publication of 'The Birds of Yorkshire, an Account of the Avifauna of the County,' by Mr. Thomas H. Nelson. It will be based on an exceptionally complete mass of material, both published and unpublished, and will include "succinct accounts of the distribution, faunistic status, migration, nidification, variation, vernacular nomenclature and folk-lore" of each species, with illustrations of "noted bird-sites or haunts." The subscription price is one guinea. Orders may be addressed to the Hon. Secretaries, Yorkshire Naturalists' Union, 259 Hyde Park Road, Leeds, England.

BEGINNING with the February number Mr. Herbert K. Job will publish in 'Everybody's Magazine' a series of articles upon Raptores and Water Birds, based on his own observations, and profusely illustrated from the photographs shown by him at the last two meetings of the A. O. U.